



TAMPERE UNIVERSITY OF TECHNOLOGY

NICHOLAS SHARAF  
CREATING INNOVATION THROUGH ITERATIVE COST  
STRUCTURE ANALYSIS FOR STARTUPS

Master of Science Thesis

Examiner: prof. Petri Suomala and  
Dr. Jouni Lyly-yrjänäinen  
Examiner and topic approved by the  
Faculty Council of the Faculty of  
Business and Built Environment  
on 12th August 2015

## ABSTRACT

**SHARAF, NICHOLAS:** Creating Innovation through Iterative Cost Structure Analysis for Startups

Tampere University of Technology

Master of Science Thesis, 94 pages

August 2015

Master's Degree Programme in Industrial Engineering and Management

Major: Managing Technology-Driven Businesses in Global Markets

Examiners: Professor Petri Suomala and Dr. Jouni Lyly-yrjänäinen

**Keywords:** Startups, Lean Startup Methodology, Cost Structures, Roadblocks, Business Model Canvas, Innovation

The global market is seeing a growing trend of startup launches. Each startup has the aim to be successful, though worryingly 90% of all startups fail to overcome the hurdles they face in their first year and go out of business. Such a high percentage of failures is also fast becoming a deterrent for people interested in pursuing careers as entrepreneurs. More so present day literature lacks the discussion on how a startup should handle multiple roadblocks coming on their way simultaneously. Significantly majority roadblocks startups face come in the shape of costs which financially cripple the businesses. Without having proper insight into cost management, entrepreneurs stand little chance.

The objective of this thesis is to identify the lean startup methodology and embed cost structure analysis into its running process. This thesis then formulates an iterative framework where cost relevant roadblocks for startups can be tackled by either innovation, new technology or outsourcing.

The derived framework is then implemented on existing startup cases. It is determined that startups require constant validation for their problem and solution hypothesis before an efficient business model can be built. Even after conception, the business model needs to be analyzed specifically to pinpoint roadblocks to its success. These roadblocks are identified and by using the concept of cost structure analysis inside the framework resolved. The framework gives entrepreneurs the tools to quantitatively assess their business model and product offering and through constant iterations develop a model which is practical in the market and as a result derive innovation.

## **PREFACE**

During my master studies, I realized my interest in startups and in pursuing a career as an entrepreneur in technology based startup industry. This led me to pursue various avenues within the startup circuit in Finland and eventually start a company of my own with the name Nauti. The experience of being an entrepreneur and the lessons learnt have truly being remarkable where a wealth of practical insight by working on field has complimented my studies in industrial management.

My work as an entrepreneur is specifically directed in business development. Naturally a startup has to grow from the bottom and thus special emphasis on business model design needs to take place. This exposed me to all aspects of the business since their inception, planning and implementation had to be taken care of by the team. I am part of a two member team which now has multiple partnerships with different specialist companies to add value to our business network. Through our experiences, the team has managed to make two significant pivots and derive innovation within our field of expertise and provide a truly exciting product to our customers. This case further extends our knowledge in the science of business model development and iteration with a specific key interest in cost management.

I would like to thank Dr. Jouni Lyly-yrjänäinen for his solid advice, encouragement and guidance throughout not only the writing process of this thesis but also through the incubation of the startup. I would also like to thank Professor Petri Suomala for his valuable comments and insights. Finally I would like to thank Mr. Valtteri Ojansuu, Co-founder Most Interesting Food, and the MIF team who work hard every day to achieve the successes highlighted in this thesis.

Helsinki, 22.08.2015

Nicholas Sharaf

## CONTENTS

1. INTRODUCTION .....	1
1.1. Background .....	1
1.2. Objective of the study .....	2
1.3. Research Methodology & Data Gathering .....	2
1.4. Structure of the Thesis .....	4
2. INNOVATION & LEAN STARTUP METHODOLOGY .....	6
2.1. Innovation and its Importance.....	6
2.2. Lean Startup Methodology.....	9
2.3. Lean Startup Methodology Process .....	12
2.4. Validating the solution and the Business Model Canvas .....	17
3. COST STRUCTURES .....	25
3.1. What are Business Networks?.....	25
3.2. What are Cost Structures? .....	28
3.3. Cost Structures in Business Networks .....	32
4. USING COST STRUCTURES TO REMOVE ROADBLOCKS .....	37
4.1. Innovation not seen as an iterative process .....	37
4.2. Roadblocks and their resolution.....	42
4.3. Roadblocks removed through innovation .....	48
5. CASE STUDY: MOST INTERESTING FOOD .....	53
5.1. Team Nauti.....	53
5.2. Most Interesting Food – Initial.....	58
5.3. Most Interesting Food – Present Day.....	63

6.	ITERATING INNOVATION IN MOST INTERESTING FOOD .....	66
6.1.	Nauti to Most Interesting Food .....	66
6.2.	Iterating Most Interesting Food.....	69
6.3.	Present day .....	72
7.	DISCUSSION .....	76
7.1.	Overview of the Problem and Framework .....	76
7.2.	Analysis of the Case through the Framework .....	77
7.3.	Analysis of the Results and Limitations.....	84
8.	CONCLUSIONS .....	86
	BIBLIOGRAPHY .....	89

## ABBREVIATIONS AND NOTATION

B2B	Business to Business
B2C	Business to Customer
BMC	Business Model Canvas
GPS	Global Positioning System
LED	Light Emitting Diode
LSM	Lean Startup Methodology
MIF	Most Interesting Food
MVP	Minimum Viable Product
OEM	Original Equipment Manufacturer
TPS	Toyota Production System

# 1. INTRODUCTION

## 1.1. Background

In today's business world, the market is rampant with young would be entrepreneurs testing their trade by launching their own startup companies. A startup is defined as a company working to solve a problem where the solution is not yet obvious and the success is not guaranteed (Blumenthal, 2013).

Merriam Webster (2015) however describes it as the act or an instance of setting in motion. It then goes on to elaborate on startups as a fledgling business enterprise. There are no specific hard rules to fit around the definition of a startup. The reason why startups are so popular is because of the freedom they give to the teams behind them.

There are not really any major rules for success in the startup industry. A successful product can come out of nowhere and sweep the market as fast as it came. A market innovation like Facebook after all was developed in a class room. That is the beauty and perhaps also the risk that startups offer. Since the environment is so volatile, people getting into the startup business take upon a lot of risk. However, irrespective of the risks, the startup industry is booming and new businesses are being created on a daily basis. (Inc, 2009)

The biggest challenge facing startup companies is in their ability to persist with their business and guide it through troubled waters to stability and success. A generic statistic in the European and US markets is that around 90% of all startups fail in their first year of conception (Blodget, 2013). The reasons behind why an alarmingly high number of startups fail is identified in this thesis. While there are hundreds of thousands of startups around, market need is somewhat limited. In other words, there are only so many products which the customer base of a specific customer segment is willing to adopt (Blodget, 2013).

The key to a successful startup and more so to a successful incubation process of a startup lies in the entrepreneur developing the organization and product based on what is reciprocated from the customer base. At this current stage, most entrepreneurs are focused on technology which is then pushed into the market in the hope that it will be adopted. (Graham, 2013) However, alternatively, a market pull based setup where a product is continuously developed according to the validation of the customer base holds a better chance of succeeding in the market. This however is difficult since entrepreneurs lack the tools and training to engage effectively with their market before moving forward. What

then results is an exercise where entrepreneurs look for solutions already existing in the market to find a quick fix (Graham, 2013). The key point to take into consideration is that while a successful startup and its offering is derived through an innovation, cheaper solutions can be found for overcoming initial hurdles by seeking innovation. It is also the major challenge facing startups in terms of achieving success.

## **1.2. Objective of the study**

According to Kotler (1988) companies have to keep on introducing to the market new products or improve the existing ones in order to remain competitive and to avoid losing significant market share. This notion is for companies which are already successful in the market however the same logic can be applied to startups. The success of the incubation of a startup is detriment on its success in delivering a competitive product to the industry. Drucker (1985) identifies that if the market grows by upto 40% within a time span of ten years, then innovation and new products lead the way for market dominance. This is specifically relevant at this stage where startup businesses are plenty.

As a consequence as many startups flourish a lot more fail. It is in the best interest of entrepreneurs to find a solid mechanism to prevent their startups from failing. Based on this the objective of this thesis is to...

*...integrate the concept of cost structure analysis in to the lean startup methodology and as a result use innovation driven alternatives to overcome roadblocks that threaten the survival and success of a startup.*

The following study aims to develop an iterative framework that embeds detailed cost structure analysis into the lean startup process and as a result gives the entrepreneur the mechanism to overcome any roadblock that it might face. It also emphasizes on always validating the solution on offer with the effectiveness of its business model before implementation. To achieve this, the thesis includes a real case study of a Finnish startup company and tests the increments to its business model with the framework developed.

## **1.3. Research Methodology & Data Gathering**

According to Rajasekar et al. (2006), research is referred to as the logical and systematic search new and useful information regarding specific topics. It is an exercise in finding solutions to scientific and social problems through an objective and systematic analysis. Brinberg & McGrath (1985) define the research process as...

*“...the identification, selection, combination and use of the elements and relations from the substantive, conceptual and methodological domains.”*



Research is characterized by Rajasekar et al. (2006) as a quest to gain knowledge. It is the discovery of new truths. Rajasekar et al. (2006) appoints the following main objectives of a research:

- Identifying new facts
- Verifying and testing the reliability of facts
- Analyzing processes to determine the relationship because the consequence and the cause
- Developing new tools, concepts and theories to solve problems
- Solving problems

Research Methodology is a combination of practices that combine elements of qualitative and quantitative methods in gathering and processing data that requires respondents to perform a ranking task (Brown, 1993). Thus research methodology can be defined as a systematic approach to solve a specific problem (Kumar, 2008). Included in research methodology is data gathering exercises. Different types of research methods are explained in Table 1 below.

*Table 1. Research methodology descriptions. (Gummerson, 1993)*

RESEARCH METHODS	DESCRIPTION
<b>Existing Material</b>	It is a secondary source of information. It consists of data gathered by third party sources for different purposes. For example: books, journals or publications
<b>Interviews</b>	Most common type of research method. Freedom granted while formulating questions with open ended answers. Information based on conversations.
<b>Questionnaires</b>	Data gathering in a systematic way. Questions are standardized and formalized. Aimed at generating data for same set of questions.
<b>Action Research</b>	Includes all aspects of research methodology requiring full attention of the researcher. Researches are change agents with the ability to influence the study.
<b>Observation</b>	Refers to firsthand experience of the researcher which cannot be expressed in words.

Gummerson (1993) describes five specific research methods that can be applied to research depending on its nature as shown in Table 1 above. These specific methods are existing material, interviews, questionnaires, action research and observation. It depends on the nature and type of the case study to determine which research methods are feasible to apply. Similarly there is always the option to combine different research methods together to complement each other. For the purpose of this thesis, existing material, observation and action research were used to carry out the research.

## **1.4. Structure of the Thesis**

This thesis is logically divided into eight chapters. The content and flow of the thesis is as follow:

1. Chapter 1 introduces the background and main objective of the thesis. It also explains the research process and data gathering methods employed while writing the thesis.
2. Chapter 2 focuses on innovation and the lean startup methodology. Initially a definition for innovation is derived and its importance in present day markets determined. Then the concept of lean startup methodology is explained with emphasis on its process and validation methods.
3. Chapter 3 discusses cost structures in details. First business networks are explained and then cost structures are defined. Lastly the chapter emphasizes on how cost structures behave within business networks.
4. Chapter 4 discusses the use of cost structures to remove roadblocks. First it is identified how innovation is not seen as an iterative process. Then after determining its iterative nature, a framework is developed to support innovation for roadblock resolution.
5. Chapter 5 introduces the case i.e. Most Interesting Food. The company and its transition from Nauti to Most Interesting Food to present day status is discussed.
6. Chapter 6 describes how during each stage of the case the iteration to the business model took place. Each stage and its relevant cost structure analysis is described in this section.

7. Chapter 7 reviews the objective and the theoretical framework of the thesis. It then applies the framework on the case study and analyzes the results emphasizing on key learning points.
8. Chapter 8 concludes the thesis.

## 2. INNOVATION & LEAN STARTUP METHODOLOGY

### 2.1. Innovation and its Importance

Innovation is and will continue to be an important topic of study for numerous different disciplines that include business, engineering, economics, sociology and science. Considering its study in various disciplines, it is interesting to note that the term itself is often poorly explained and thus can be confused with related terms that share some characteristics with it. These terms are change, invention, creativity and design. Innovative products can be easily picked up by anyone as an example such as Tesla car, iPod or the common laptop. However when it comes to specifying what exactly are the innovative aspects of these products, it becomes a bit more problematic. Among academics, there is a difference of opinion about what innovation really means. A common generalized definition that encompasses most of what everyone agrees on is taken from the Oxford Dictionary of English (1998). It defines innovation as...

*“...making changes to something established by introducing something new”*

This definition does not suggest that innovation must be radical i.e. completely alter the market or product or that it occurs exclusively to products. It also does not suggest that innovation is exclusively limited to big organizations or ambitious would be entrepreneurs (O’Sullivan & Dooley, 2008). Furthermore it does not suggest that innovation is exclusively for profit-making business enterprises; innovation is as relevant for a local clinic, non-profit relief organization or local governmental institutes as it is for a business. Within the organization i.e. the organizational context, innovation can appear within products, processes, or services (Rosenfeld & Sarvo, 1991). More so, innovation itself can either be incremental or radical, and it can be found at various levels within the organization i.e. in management, between management, department groups, project teams and even within individuals (O’Sullivan & Dooley, 2008).

Innovation should be considered as means that transform ideas into substantial outputs, which increase customer value (Drucker, 1985). This can be driven by either good or bad ideas. In management of the innovation process, destroying poor ideas often is as important as nurturing good ones; in this way, limited resources can be relinquished and good ideas spotlighted. Every good idea usually cannibalizes or replaces an already established one (Drucker, 1985). The goal and success driver of every progressive organization is to successfully develop good ideas. This specific trait then needs to be added to the above definition. Thus innovation is the...

*...process of making changes to something established by introducing something new that adds value to customers*

This addendum is important. By describing an innovation as adding value to customers, there is the assumption that naturally the customers who experience the added value will happily persist and continue to use the product, process, or service due to experience enhanced value experience (O'Sullivan & Dooley, 2008). This trend will then lead to increased growth for the organization. How a company manages this growth is also a discussion that falls under innovation. Innovation management is the process of managing innovation within an organization. This includes key processes such as managing ideas, defining goals, prioritizing projects, improving communications, and motivating teams. For businesses to successfully sustain their objectives, it is imperative to continuously innovate and replace existing products, processes, and services with more effective ones that provide greater customer value. (O'Sullivan & Dooley, 2008).

This leads to an emerging perspective by academics and specialists in the field of innovation to define innovation in the broadest context possible. The major reason for this perspective is that narrowing the definition may limit creativity by excluding certain avenues of investigation. It is also important to understand that innovation itself is linked to the concepts of novelty and originality (Routledge, 2012). However, novelty is highly subjective. What may be an insignificant change for one organization may be a significant innovation for another (O'Sullivan & Dooley, 2008). Based on this perspective, innovation is...

*...the process of making changes, large and small, radical and incremental, to products, processes, and services that results in the introduction of something new for the organization that adds value to customers and contributes to the knowledge store of the organization.*

The concept of the knowledge store of an organization is somewhat similar with the concept of organizational learning. An organization that can continuously learn and adapt its behavior to external changes that effects it can do so by continuous increments to its collective knowledge store (Routledge, 2012). An important aspect to consider of any product which is innovative is that it would not always remain innovative. Market adoptions are fairly fast with competitors emerging as soon as the product hits the market. Apple and its iPhone innovation and the speed at which its competition developed is an interesting example. This makes it mandatory and of extreme importance for any innovation process to be incremental or radical in order to keep ahead of the market. These can be listed in two specific categories (Greenhalgh & Rogers, 2006):

- Product Innovation
- Process Innovation

The first refers to either the introduction of new products into the market itself, or rather a major change in the existing product. On the other hand, process innovation refers to the design or development of a new process altogether for manufacturing, managing or delivering goods and services. Some authors, like Schumpeter (1997), do argue that a third category does exist for innovation under organizational change but it is considered that this falls under process innovation also. This is because organization change itself is a process.

After having iterated a suitable definition for innovation, the important question is how does competition drive innovation and economic growth? As a preliminary starting point, it is important to understand that innovation is not only about new products and technology although most would entrepreneurs would think like that due to its glamour appeal (Routledge, 2012). Innovation also encompasses within itself new processes, new business systems and new management methods, all of which have a crucial bearing on productivity and hence growth (O'Sullivan & Dooley, 2008).

In terms of management, for instance, McKinsey (2005) worked with the London School of Economics to look at the impact of management innovation on productivity. In a study of 700 manufacturing companies in the UK, France, Germany and the US, it was determined that there existed an indisputable link between the companies that enjoyed the highest productivity, and those that used best-practice techniques in their operations management, performance management, and talent management. (Winton, 2014)

Similar conclusion can be determined from process innovation. A study by the McKinsey Global Institute (2005) analyzed US automobile industry's response to pressure from global competition. Between 1987 and 2002, productivity performance increased by 3.3 percent a year. However around 45 percent of this increase was not caused by product innovation but rather process innovation. This was mainly the adoption of the lean production techniques pioneered by the Japanese. The introduction of new products, popular light trucks, were only responsible for 25 percent of the increase. (McKinsey, 2005)

In comparison, European high-tech industry trails behind both the US and Asia in terms of productivity and growth. A lack of scalability is often cited as the main reason behind this problem. Competition in this sector is intrinsically global. Process and product innovations need to be scaled globally to be competitive. The global leadership of companies such as Microsoft, SAP and Oracle proves the point. But today, less than a fifth of the largest high-tech companies in the world are European, while nearly a half are from the US. Moreover, the US and Asia both have large high-tech clusters – groups of companies that together employ anywhere between 100,000 and 300,000 people. No European cluster comes near this critical mass: Europe lacks the vibrant clusters so conducive to innovation. Aghion (2011) pointed out in his research that it was the constant

entry of new firms with new ideas that guarantee waves of innovation that make old ideas, skills, technologies and equipment obsolete.

But Europe also lacks enough really large high-tech players that can adopt the innovations that originate in clusters and scale them globally. In the absence of global scale, companies tend to be specialist players in niche markets, where competition is low and productivity suffers. (McKinsey, 2005) This sets an interesting platform for innovations to enter the market in the form of startup businesses (Hudson, 2015). New ideas alongside new innovations are organized and presented into the market in the form of new businesses. The atmosphere for innovative business is ripe as the year 2015 has seen the largest year-over-year increase in startup growth in the past two decades (Hudson, 2015). Technological innovation and entrepreneurship are considered to be key factors to national economic growth (Crosby, 2000; Solow, 1956; Nadiri, 1993). Inability to exploit technological opportunities that occur and lack of innovative efforts can cause slow growth in countries (Fagerberg, Guerrieri & Verspagen, 2000). Unfortunately, a majority of new enterprises fail within the first years of existence. Statistics show that about a third of the Swedish firms started in 2005 had failed three years later (Hjalmarsson, 2010), and similar numbers can also be found for US startups (Shane, 2008).

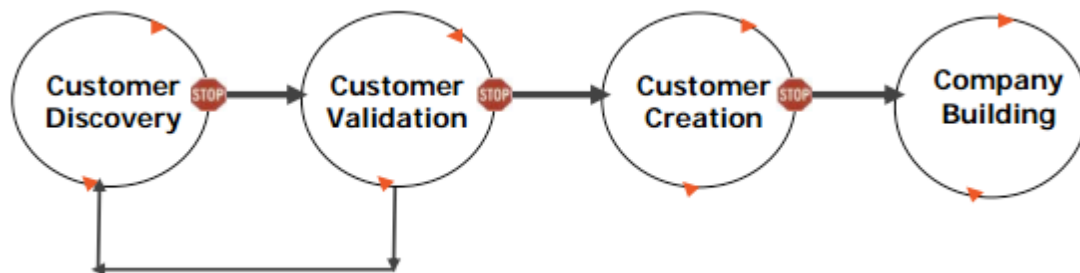
The question then arises, when developing an innovation, what is the process and framework to follow to take the idea, test it in the market and then generate a feasible startup business out of it. This question is tackled in the next section where Lean Methodology for Startups is discussed in detail.

## **2.2. Lean Startup Methodology**

Lean Startup Methodology (LSM) has become increasingly popular during the last years as an approach to create and manage startups, especially among IT-practitioners. The LSM approach advocates making use of early customer interaction where assumptions concerning the business model are tested in the marketplace through a series of iterations (Ries, 2011). The term lean startup is derived from principles of lean manufacturing, a manufacturing philosophy and principle mainly originated from the Toyota Production System (TPS) that is centered on the aim of identification and minimization of waste (Emiliani, 2006). Waste is defined as any human activity which absorbs resources but creates no value (Womack & Jones, 2003).

In the context of a startup, waste is described as anything that restricts the team from learning how to create value for its customers (Ries, 2011). The term customers is broad ended and can include all the external parties e.g. individuals, companies and organizations, for which the startup's offering could potentially be applicable. The approach also draws from principles of other management theories such as agile development, design thinking and lean product development. The approach is similar to

other concepts such as Customer Development (Blank, 2006) and Nail-It-then-Scale-It (Furr & Ahlstrom, 2011). Blank's Customer Development model can be viewed below in Figure 1.



*Figure 1. Customer development model.*

The model consists of four iterative Phases. First, the customer discovery Phase focuses on identifying and understanding customer problems and needs. Secondly, in the customer validation Phase a plausible sales model is developed to test in the market. Third, customer creation deals with end user demand, and how to create and drive it. Finally, company building refers to changes its focus from learning to growth having already ascertained market information and test their model in the previous Phases.

The Product/Market fit is another important element in the LSM literature, a term that is often attributed to Marc Andreessen. Andreessen (2007) describes product/market fit as being in a good market with a product that can satisfy that market. In other words, it compares whether the startup has built something people want or not. Blank (2006), on the other hand, defines Product/Market fit as whether the startup has found a repeatable and scalable sales model that is effective in the market. Not until the startup has achieved Product/Market fit with repeatable customers with a repeatable sales process should the startup move on to the next Phase and scale up the business (Blank, 2006; Furr & Ahlstrom, 2011). Thus the heart of the LSM model relies heavily of ensuring that on every step of the way, each iteration to the sales model and product offering is tested in the market.

In order to proceed with the LSM methodology, it is important to understand and analyze the principles of LSM which explain how this Product/Market fit is analyzed. The authors of the LSM literature (Blank, 2006; Ries, 2011; Furr & Ahlstrom, 2011) do all provide a number of principles (or “fundamentals”) capturing the essence of their view of LSM. These principles are:

- Get out of the building
- Pivot if necessary
- Validated Learning
- Minimum Viable Product



- Iterate Rapidly
- Avoidance of Premature Scaling

Firstly to understand Get out of the building principle, it is important to acknowledge that a business model of a new venture is filled with assumptions and hypothesis since little is known at start. In order to ascertain vital hypothesis in the business model, entrepreneurs should interact with customers as early as possible. Blank (2006) explains that the entrepreneur should “leave guesswork behind and get outside the building” in order to understand “their reality” and learn about important customer problems, what matters to them and whether the startup’s product solves that problem.

Secondly an entrepreneur should be willing to Pivot if necessary. When the assumptions of the entrepreneur regarding its business model turn out to be inaccurate after repeated interactions with customers, it is necessary then for that entrepreneur to consider a major change or pivot to their business. Ries (2011) defines the pivot as a structured course correction designed to test a new fundamental hypothesis about the product, strategy, and engine of growth. The pivot is a decision to change some or several parts of the hypothesis concerning the business model of the startup based on learning from customers.

Third is the principle of Validated Learning. The purpose of the startup is to learn how to build a sustainable business model. In order to fulfill this purpose, it is necessary for the entrepreneur to put the learning made by its processes through a scientific quantification in order to test the credibility of their hypothesis. Validated learning itself should always be backed up with empirical data gathered from real customers. (Ries, 2011) Furthermore, the entrepreneur should develop an attitude of learning that enables him to discover a real opportunity by recognizing common learning traps in order to avoid them, reframing the purpose of the venture to be what the customer wants rather than their own ideas and being big enough to accept that their own ideas might be impractical in the market. (Furr & Ahlstrom, 2011).

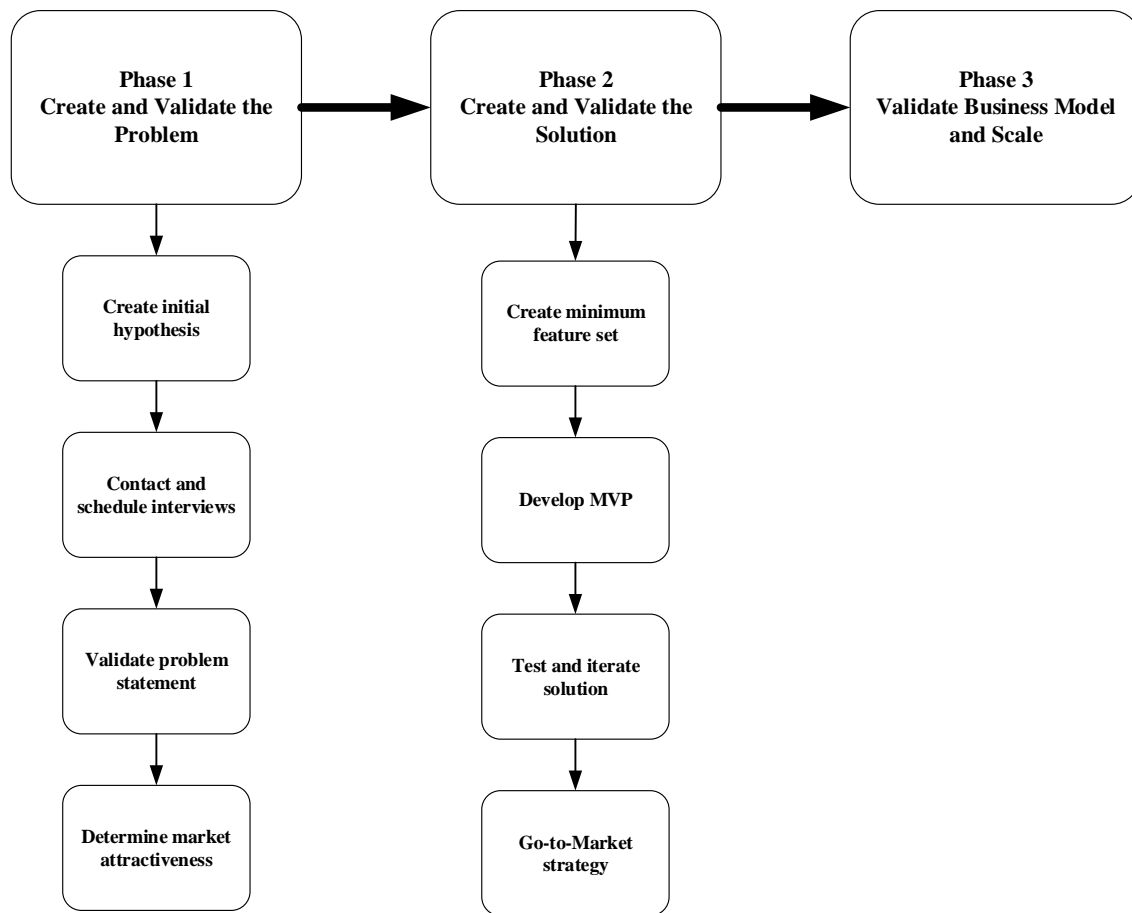
Fourth is the principle of Minimum Viable Product (*MVP*). MVP is an effective way to test and learn from customers. Ries (2011) defines the MVP as the version of the product that enables a full turn of the Build-Measure-Learn loop with a minimum amount of effort and the least amount of development time. A MVP consists only of those features that allow the product to be deployed in the market and is typically tested in a test group of customers aimed to provide feedback and test problem hypothesis. A MVP may be a landing page with a click-through to examine interest or a demo that shows the customer how the problem is being solved. A similar term is the minimum feature set, which Furr and Ahlstrom (2011) define as the smallest, most focused set of features that will drive a customer purchase. The minimum feature set represents the features that customers must have in order to buy.

Fifth is for the startup to Iterate rapidly. LSM is an iterative process similar to the OODA-loop developed by John Boyd and refined in Ries (2011) Build-Measure-Learn feedback loop. The aim is to iterate through the feedback loop as fast as possible, not to reduce the quality of each iteration (Ries, 2011).

Sixth and perhaps the most overlooked principle for LSM is to avoid premature scaling. One of the major causes to startup failure is premature scaling. Premature scaling means that the startup starts to spend money on growth, e.g. hiring sales persons, leasing offices, and expensive marketing, before determining the Product/Market fit. (Furr & Ahlstrom, 2011) Startups should avoid scaling before finding a valid business model with a repeatable sales process (Blank, 2006).

### **2.3. Lean Startup Methodology Process**

Experts and academics to a large extent agree with each other on LSM and their associated recommendations to entrepreneurs (i.e. working in small groups, having an iterative process, going for small markets first and develop the products with early customer interaction.) Nevertheless, as with opinions, different authors disagree on varying practical aspects of LSM as each expert has their own way of doing things. Thus in this section, a unified version of the LSM process is represented in Figure 2 to make sense of it all.



**Figure 2.** *The LSM Process.*

This section will explain in detail all three Phases of the LSM model in their respective order highlighting core processes within each Phases. The LSM process begins with the development a core strategic hypothesis which is then tested through various LSM principles with customers. This strategic hypothesis is an iterative first derived from identifying problems and needs, then deriving possible solutions and their reception in the market. Only once an entrepreneur is successful in these two is it advised to proceed with final stage that is validation of the business model and scaling.

The first Phase of the LSM process i.e. create and validate problem hypothesis includes:

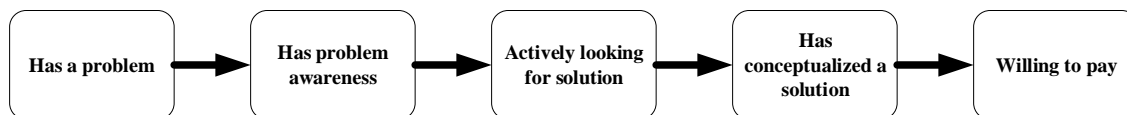
- Creation of initial hypothesis
- Contact and schedule interviews
- Validating problem statement
- Determine market attractiveness

The first step for the initial Phase of the LSM is the creation of the initial hypothesis. Perhaps the underlying requirement for a successful startup is to find a problem which is relevant to a specific customer group (Furr & Ahlstrom, 2011; Blank, 2006; Ries 2011).

The entrepreneur focus should always be on the bigger problem since small problems seldom generate sizable spending habits from customers (Furr & Ahlstrom, 2011). Furthermore, the identification of the first hypothesis of the problem statement should coincide with the company's basic mission and its core values (Blank, 2006). This is similar to argument given by Ries (2011), who explains that the initial hypothesis of problem statements should reflect the company's vision. The core values of business tend to be not very specific, e.g. maximizing the profit in a sustainable way, and thus should not be relied upon for deriving problem hypothesis. A company's basic mission however is more specific and is generally a reflection of the first impressions gained from the market and the product (Blank 2006).

A company's mission statement tends to remain the same whereas its core values continue to evolve over time. These changes to the core values need to be a reflection of the information gathered from the market and properly analyzed. (Blank, 2006). Furr & Ahlstrom (2011) do not exactly specify how the first hypothesis is determined. However each author has their own preferences to proceed and it makes an interesting contrast. Blank (2006) takes a more tedious and extensive route by including assumptions about the customers' problem statement, the proposed solution, competition, pricing, demand and market variables. Ries (2011) on the other hand emphasizes two important educated assumptions, which he labels as leaps of faith, which forms the basis of the complete business model. These are the value and growth hypothesis. The value hypothesis is an initial market based assumption as to how the company will create value, whereas the growth hypothesis is the preliminary assumption identifying the scalability possibilities for the business itself. A successful entrepreneurial project is determined by the success with which these two hypothesis are validated (Ries, 2011). Furr & Ahlstrom (2011) in contrast create two different hypothesis. The first is aimed at the problem statement and is referred to as the monetizable pain hypothesis. The second hypothesis referred to as the big idea hypothesis is a sketch of the company's business model including problem statement, solution and offering, targeted customer groups, customer value plan and competitive advantage (Furr & Ahlstrom, 2011).

All of the above mentioned models however stick to one key point (i.e. to validate problem hypothesis.) The only way to validate the problem hypothesis is to go outside into the market, determine a target group and use their opinions as feedback. One way of achieving this is to create a list that segments customers into groups such as experts, average users and first in line for new things (Blank, 2006). These segments not only help in identifying problems but might also end up providing valuable new ideas, contacts, visionaries and influencers for the product (Blank, 2006). Another name used by Blank (2006) for the visionaries is early evangelists. Early evangelists are identified by the following characteristics presented in Figure 3. Early evangelists are a blessing for the business since they are aware of the problem and keen to promote solutions for it (Blank, 2006).



**Figure 3.** *Characteristics of early evangelists.*

With the conceptualization of the initial problem statement and a set of target customers identified, it is important to bring the two together to validate this initial hypothesis. There is mutual agreement amongst specialists of LSM about the importance of having validated learning, which reflects unanimous support for every claim that a team might have should be test and validated the customer groups. This naturally can only be done by communicating with customers. (Gustafsson & Qvillberg, 2012)

Communication with customers can be done by contacting and scheduling interviews with them which is the second core process in the initial Phase. There are generally two different techniques for the initial contact with the identified customer, either by email or by telephone (Blank, 2006; Furr & Ahlstrom, 2011). There is no point in contacting customers without learning. Thus it is recommended to keep track of what gets the customer interested and repeat. This would increase the hit rate of getting customers to agree with the hypothesis (Furr & Ahlstrom, 2011; Blank, 2006). Furr & Ahlstrom (2011) explain that the hit rate provides a key performance indicator to measure the hypothesis. Hit rate is a quantitative number that represents the percentage of the customers contacted that agree to a meeting or interview. The basic rule of thumb is that around 50% positive response to calls/cold calls signifies that a valid problem has been identified. In case of achieving lower hit rates, it is a good indicator for the entrepreneur to alter their hypothesis and proceed with the contacts again (Gustafsson & Qvillberg, 2012).

The next step to take into consideration is validating the hypothesis. Once the entrepreneur has set up an interview or scenario to talk to customer groups, it depends on the complexity of the hypothesis to determine which method is best to proceed with validation (Blank, 2006). In the case of interviews, for complex hypothesis, several interviews might need to take place. The first interview would then focus on major questions while the latter are aimed at understanding specific customer behavior, problems, buying habits and get as much information about the market as possible (Gustafsson & Qvillberg, 2012). For simpler hypothesis, casual meetings and telephone interviews could be sufficient to get relevant information (Furr & Ahlstrom, 2011). It is always good to remember that sales is not the primary objective of this interaction but rather the identification of problems which are major enough for the customer to be willing to pay for their solution (Furr & Ahlstrom, 2011; Blank, 2006). Furthermore, finding people who agree with the hypothesis is not confirmation. It is important to have quantifiable numbers to back its conclusions (Furr & Ahlstrom, 2011).

There may be differences between the opinions of the managers and the users of a product (Furr & Ahlstrom, 2011). The entrepreneur should therefore consider the buying panel, which have three types of customers; the end-user (the user of the product), the technical customer (the person who install and maintain the product) and finally the economic customer (who makes the final purchase decision) (Furr & Ahlstrom, 2011). In contrast, Blank (2006) argues that the title of the customer is not of importance at this stage. After the hypothesis have been modified iteratively the entrepreneur should evaluate the response from the customers (Furr & Ahlstrom, 2011).

In case of active engagement with customers drawing poor results, it is essential for the entrepreneur to go back and work on their problem hypothesis. In some cases, a major pivot might be the only way forward to proceed. In the case that the hypothesis has been validated as a big problem, the entrepreneur should move on to evaluate the attractiveness of the segment (Furr & Ahlstrom, 2011).

For a validated problem hypothesis, it is important to evaluate whether the segment that confirmed the prognosis is attractive enough for a profitable business to depend on (Furr & Ahlstrom, 2011). This is referred to as exploration of market attractiveness. Furr & Ahlstrom (2011) presents three main aspects to consider:

- Market size & growth
- Competition
- Matching the capabilities of the company with the market

A basic determination of the market size requires the entrepreneur to determine how many paying customers exist for the product in the total complete market. The targeted market must be large enough to justify the investments needed. Competition is also a relevant factor in this decision. There is no point in entering a market where the solution on offer is already offered by an alternative with an existing and loyal customer base (Gustafsson & Qvillberg, 2012). Finally, and perhaps ironically, the determined problem hypothesis should be such that the company has the resources and capability to resolve themselves. (Furr & Ahlstrom, 2011). Naturally not all market information can be determined from the customer and thus retrieving market knowledge by studying industry trends, key market players and fields of investment offer a good alternative to uncover more information (Blank 2006) A successful analysis of the customer information gathered alongside key market information is enough for the entrepreneur to proceed to Phase 2 of LSM.

## **2.4. Validating the solution and the Business Model Canvas**

The creation and validation of solutions for the validated problem hypothesis is Phase 2 of the Lean Startup Methodology. After a validated problem has been found and the target segment found attractive it is time to employ resources to develop an effective solution (Furr & Ahlstrom, 2011). This Phase is entwined with the feedback loop generated from the customer and thus all experts agree must be iterative in nature. This section is divided in three steps (Gustafsson & Qvillberg, 2012):

- Develop the minimum feature set hypothesis
- Develop a virtual prototype/MVP
- Test and modify the solution

Before going into details, an entrepreneur must develop a product that fits the major customer needs yet has the minimum resources required to build it (Furr & Ahlstrom, 2011; Ries, 2011). This is only possible if the entrepreneur determines what these minimal features are. Furr & Ahlstrom (2011) recommendation for the creation of a minimum feature set is based on the big idea hypothesis in earlier customer interaction. The purpose of this exercise is to develop what matters without spending resources on non-validated activities. The feature set has to be validated by the customer and iterated accordingly. Blank (2006) includes the feature set in his initial hypothesis and also stresses on its iterative nature (Ries, 2011; Furr & Ahlstrom, 2011; Blank, 2006).

The sketching of a basic minimum feature list then needs to be complemented by splitting the target customer group into further groups (Furr & Ahlstrom, 2011). This exercise takes place to identify which kind of characteristics customers within the target group prefer what kind of features. A customer to feature matrix is an efficient tool to consider while making this analysis (Furr & Ahlstrom, 2011). Once active, the matrix allows the entrepreneur to prioritize which kind of customer to target for which particular feature (Blank 2006). The matrix can in the future also be used to find the right persons to talk to.

The whole point of determining a specific feature list is to then develop an MVP from it that requires the least amount of resources (Ries, 2011). Failure to sketch a minimum feature list identifies varying demand for solutions within the target group and thus the initial problem and solution hypothesis would need to be altered (Furr & Ahlstrom, 2011).

The completed minimum feature set is then used to develop the prototype referred to as the MVP. Ries (2011) suggests that the most valuable feedback from customers is received once they have access to a prototype to use. Thus having a prototype developed from an already validated minimum feature set provides the most lean way of gathering information and developing products without using too many resources (Ries, 2011). In

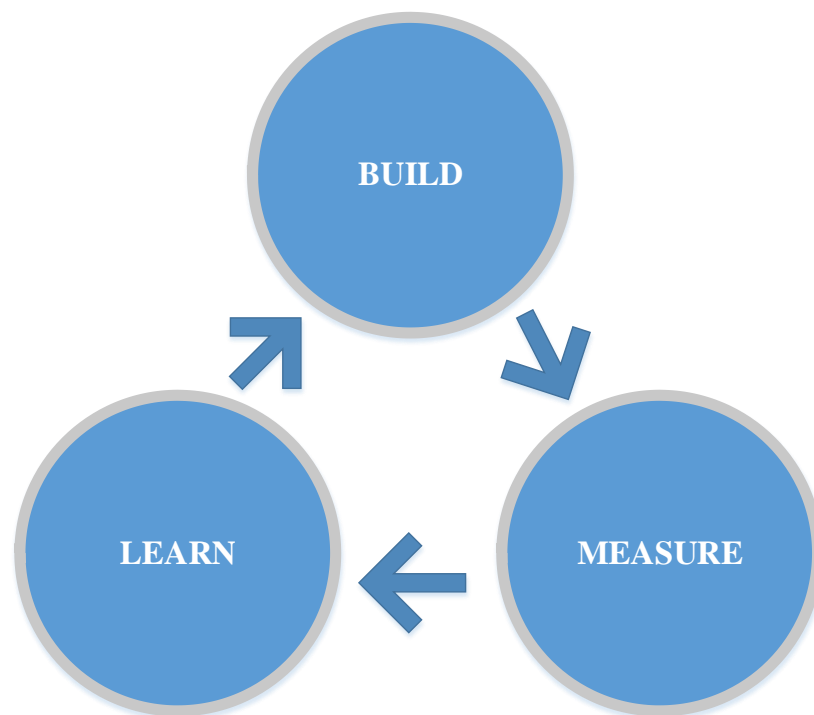
essence, the MVP represents the simplest possible solution to the plotted problem that is being tested. Having customers test prototypes, use and give feedback gives the entrepreneur the chance to iterate and develop only the prototype itself methodically (Ries, 2011; Furr & Ahlstrom, 2011). The MVP is a tool to let customer feedback guide the design and development of the product (Ries, 2011).

The first MVP does not need to always be a ready-to-use product. It can also be a virtual prototype or simplistic system designed to illustrate the value (Furr & Ahlstrom, 2011; Ries, 2011; Blank, 2006). The first step in developing a virtual prototype is to determine which technology to use. Virtual prototypes are very flexible and can be illustrated through simple means e.g. a PowerPoint presentation or a video. They aim at delivering value to the customers which then gives the entrepreneur an insight into whether their proposed solution hits the mark with the actual need of the customer or not (Gustafsson & Qvillberg, 2012). It is important for the entrepreneurs to clarify that the company is in the developing Phase and not selling any products (Blank, 2006).

The physical prototype is either developed from the validation of the virtual prototype or the minimum feature set. The process of building an MVP is not similar to that of product development process since this does not have a strong emphasis on quality control (Ries, 2011). An entrepreneur's perception of quality differs from that of the end customer and thus an MVP is a tool used to determine what precisely is quality for the customer. The first prototype has to be cheap, inexpensive and as simple to use as possible (Furr & Ahlstrom, 2011). Ideally, customer interaction with real MVPs gives them a better understanding of the solution on offer and thus the issues raised tend to be more credible and sometimes very different from the ones raised during interviews and initial research. Many customers do not acknowledge the problem until a solution is in their hands (Ries, 2011).

Once an MVP has been designed, it is necessary to test and modify the solution. All experts use iterative processes to test their MVPs. However naturally there are differences between each of them. Ries (2011) views the process as one Phase, whereas Furr & Ahlstrom (2011) use three separate iterative processes in their evaluation of the MVP; the virtual prototype, the prototype and the solution. Ries (2011) method is more feasible for this study and his Build-Measure-Learn loop is illustrated in the Figure below.



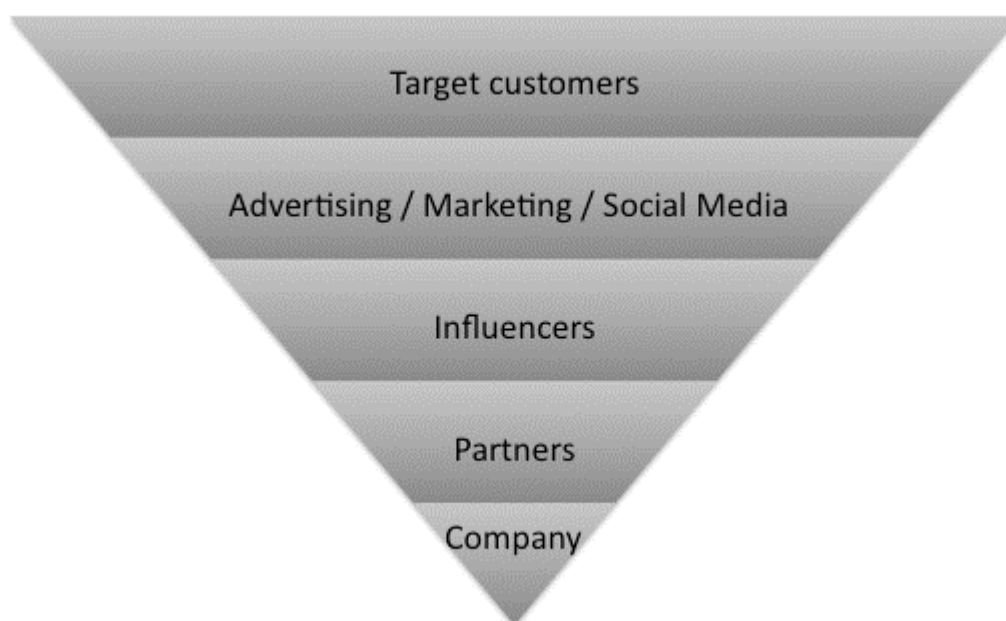


**Figure 4.** *The Build – Measure – Learn loop.*

The first phase is self-explanatory and centers around building the MVP based on the original determined hypothesis. The next phase is measure which is aimed at implementing changes to the product based on the information received from the customer. The changes made through feedback are then tested again with the customers and the results analyzed. Each analysis provides learning to the entrepreneur who is then expected to take this learning onboard and build an iterated product to be test again. As the product or service is altered according to learning, the offering should move closer to the ideal model that the customer would like. If this is not the case, then the entrepreneur needs to consider a major business pivot.

Finally, once a prototype has been sufficiently iterated into a product that generates decent value for the customer to be willing to pay for, LSM moves to the final process of phase 2. This is the Go-to Market Strategy. As was earlier identified, while gathering information about the problem and solution, information regarding the market is also gathered. This is vital since without market information, formulating a strategy to enter it is almost impossible (Furr & Ahlstrom, 2011; Blank, 2006). Customer buying habits coupled with information on which sales models achieve higher success rates in the relevant industry is a good starting point to develop a sales model (Furr & Ahlstrom, 2011). After all, the Go-to-Market strategy identifies the best possible way of selling products and making a footprint inside the market. Important aspects to take into consideration while formulating the strategy is to determine how the customer finds out about the product, which means of communication are most effective and from where

will the customer buy the product. An illustration of the key players involved in the Go-to-Market strategy of a startup is represented in Figure 5 below.



**Figure 5.** Key players for Go-to-Market strategy.

The Go-to-Market strategy aims at formulating an effective understanding between all the players, the company and the end target customers (Furr & Ahlstrom, 2011). Partners refer to players that are part of the supply chain of the company. Most importantly they might be wholesalers or resellers that give access to customers of the startup's product. Influencers, on the other hand, are opinion makers within the industry whose backing would leverage the company's product into the mind of the customers (Gustafsson & Qvillberg, 2012). They might be customer groups, social figures, celebrities or media personnel. In order to make the most of influencers, an entrepreneur needs to determine what is most important to them and develop a relationship from there (Furr & Ahlstrom, 2011). The last player and perhaps the most significant is the marketing player. All marketing campaigns are conducted through advertisements, social media management and social ventures. Their effectiveness determines how aware a potential customer is of the product and how well the value of the solution is communicated to them.

After formulating the Go-to-Market strategy and its successful testing using the Build – Measure – Learn loop, the entrepreneur has a potentially successful business model. In order to ensure that this indeed is the case, the entrepreneur must validate the business model and the pursue scaling. This is Phase 3 of the Lean Startup Methodology. Throughout this thesis, the business model of companies has been referred to but the term has not been fully defined. This is because authors vary in opinion in terms of specific definitions for the concept due to its complex nature. For the sake of simplicity, this thesis discusses the concept through the periscopic vision of Lean Startup Methodology.

The origins of the expression business model can be traced back to the writings of Peter Drucker (1985), but the notion has gained prominence only in the last decade. While the business model has been part of the business jargon for a long time, Markides (2008) accepts that there is no widely accepted definition. Magretta (2002) defines the business models as a collection of stories that explain how enterprises work. She then refers to Peter Drucker and explains that a good business model provides the answer to three basic questions:

- Who is the customer
- What does the customer value
- By which economic logic can it deliver value to customers by making them pay

According to Magretta (2002) a business model is the approach by which a business or organization looks to earn money. While not formal, the approach taken by Magretta (2002) does simplify business models in such a way that they have to answer two fundamental questions related to the value provided to the customer and whether the organization has the ability to capture value in the process of serving customers.

The definition is considered to be too broad and imprecise making it difficult to capture the essence of what a business model truly should be. Amit & Zott's (2001), in contrast however, is less ample (as it focuses on e-businesses) but precise. Amit & Zott (2001) analyze a sample of US and European e-business models to identify the drivers of value creation and come up with a conclusive definition for business models. A business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities. Transaction content refers to the product or service on offer, as well as capabilities required and resources spent to deliver this product (Zott & Amit, 2009). Transaction structure refers to the supply chain through which a product is developed and delivered. Finally, transaction governance refers to the way flows of information, resources, and goods are controlled by the relevant parties, the legal form of organization, and the incentives to the participants. (Amit & Zott, 2001)

Having categorized the three essential aspects of a business model, entrepreneurs use a framework to formulate and categorize the important aspects of their theoretical model in a concise manner. It is the quintessential tool in the armory of an entrepreneur to test out their model and make iterations to it. It is a tool advocated in LSM and in widespread use all over the global startup industry. This framework, referred to as the Business Model Canvas is presented in the Figure 6 below:

**The Business Model Canvas**

Designed for: \_\_\_\_\_ Designed by: \_\_\_\_\_

On: \_\_\_\_\_ Iteration: \_\_\_\_\_

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
	Key Resources		Channels	
Cost Structure		Revenue Streams		

www.businessmodelgeneration.com

**Figure 6. Business Model Canvas.**

As can be seen from the Figure, the canvas is split into sub-categories to help the entrepreneur categorize their business models and analyze each aspect of it. It is important to understand that each aspect present in the Business Model Canvas is interlinked and their effective working simultaneously defines whether the model is feasible or not. These categories are:

- Key resources
- Key activities
- Key partners
- Value propositions
- Customer relationships
- Channels
- Customer segments
- Cost structure
- Revenue streams

For the sake of simplicity, the thesis sorts different categories of the business model canvas together and explains them in tables. The first group is key resources, activities and partners. The second group is cost structures and revenue streams and whereas the third group is value propositions, customer relationships, channels and customer segments. These are described in Table 2, Table 3 and Table 4 below.

**Table 2.** *Key resources, activities and partnerships for BMC. (Coes, 2014)*

<b>Key Resources</b>  The most important assets required to make a business model work	<b>Important questions to answer</b>  Which key resources are required by <ul style="list-style-type: none"> <li>• Value propositions</li> <li>• Distribution Channels</li> <li>• Customer Relationships</li> <li>• Revenue Streams</li> </ul>
<b>Key Activities</b>  The most important activities a business needs to perform to make its business model work	Which key activities are required by <ul style="list-style-type: none"> <li>• Value propositions</li> <li>• Distribution channels</li> <li>• Customer relationships</li> <li>• Revenue streams</li> </ul>
<b>Key Partners</b>  The network of suppliers and partners necessary to make the business model work	<ul style="list-style-type: none"> <li>• Who are the key partners</li> <li>• Who are the key suppliers</li> <li>• Which key resources are being acquired &amp; from whom</li> <li>• Which key activities do they perform</li> </ul>

**Table 3.** *Cost structures and revenue streams for BMC. (Coes, 2014)*

<b>Cost Structure</b>  A cost structure explains all the costs that incur within a company while running its operations	<b>Important questions to answer</b> <ul style="list-style-type: none"> <li>• What are important costs within the cost structure</li> <li>• Which key resources are most expensive</li> <li>• Which key activities are most expensive</li> </ul>
<b>Revenue Streams</b>  The cash a company generates through each customer segment	<ul style="list-style-type: none"> <li>• Which value do customers pay for</li> <li>• How are they currently paying</li> <li>• How much does each revenue stream contribute overall</li> <li>• How are customers currently paying?</li> </ul>

**Table 4.** Value propositions, customer relationships, channels and customer segments for BMC. (Coes, 2014)

<b>Value Propositions</b>  The bundle of key services and features that provide value to a specific customer segment	<b>Important questions to answer</b> <ul style="list-style-type: none"> <li>• What value is delivered to customer</li> <li>• Which problems are being solved</li> <li>• Which bundles are being offered to which segment</li> </ul>
<b>Customer Segments</b>  Different groups of people or organizations that an enterprise or company reaches and serves	<ul style="list-style-type: none"> <li>• For whom is the value being created</li> <li>• Who are the most important customers</li> <li>• Who are the least important customers</li> </ul>
<b>Channels</b>  The means by which a company reaches and delivers value to its customer segment	<ul style="list-style-type: none"> <li>• How do customers want to be reached</li> <li>• How are they being reached</li> <li>• How are the channels integrated</li> <li>• Which one is most effective for customers</li> <li>• Which one is most cost effective</li> </ul>
<b>Customer Relationships</b>  Types of relationships a company establishes to cater to specific customer segments	<ul style="list-style-type: none"> <li>• Type of relationships each segment wants</li> <li>• Which ones have been established and their cost</li> <li>• How are they integrated with the business model</li> </ul>

Each of these aspects of the bmc are evaluated individually and then, through the careful analysis, evaluated holistically to judge whether the model works or not. At every step of the way, the only plausible way for entrepreneurs to evaluate each aspect is by testing their models in the market and with their partners. With every pitfall, the relevant aspect of the model is altered and its effect on the business model noted. Each change effects other aspects which then need to be altered until a stable state which is feasible to run in the market is met. This is the stage when scalability can take place. However an important practice for every entrepreneur is to keep the evaluation of their business models through the canvas continuous since models behave like organic mechanisms that keep on altering as the market changes. (Berg, 2011)

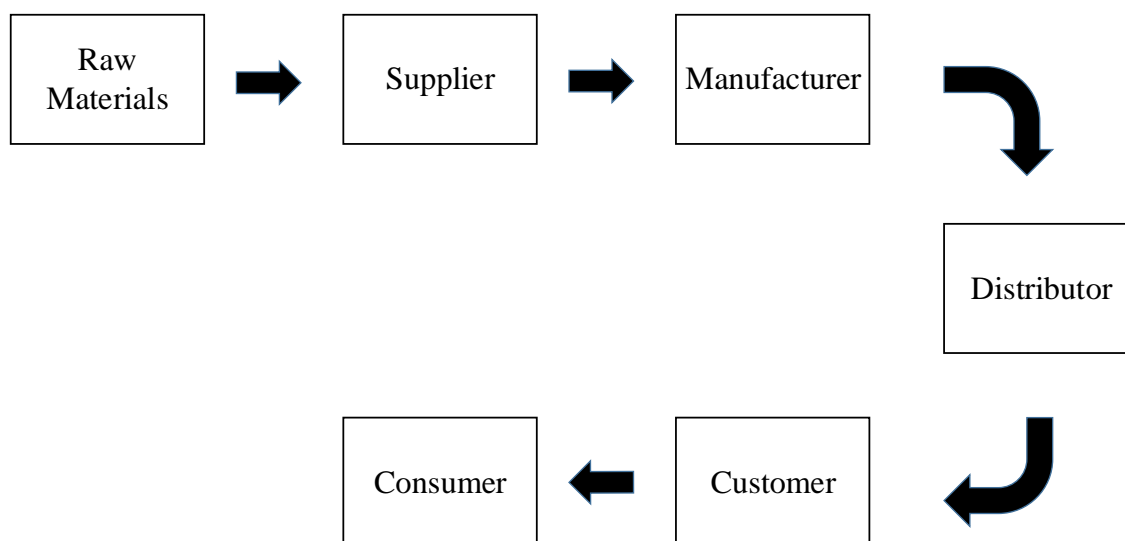
### 3. COST STRUCTURES

#### 3.1. What are Business Networks?

Today the global markets are embroiled in fierce competition. This has led to the introduction of products that have shorter life cycles alongside increased investment and focus on business networks to cope with the heightened expectations that customers now have. This, coupled with major advances in communication and transportation technologies e.g. internet, freight and mobile communication, has made business networks evolve to a degree that they form a substantial part of each enterprise's business in their quest to deliver value to customer. (Simchi-Levi, 2004) This naturally has also led to advance in business network management.

Business networks are closely related to the supply chain and supply chain management (Kaminsky, 2003). To shortly explain what a supply chain is, a typical example where raw materials are procured and items are produced at one or more factories is taken into consideration. These items are then shipped to warehouses or storage facilities for intermediate storage, and then further transported to wholesalers, or retailers from where the end customers can purchase. This complicated set up, explained in simple terms, is built on the principle to reduce cost and improve service levels. For this, effective supply chain strategies must take into account the interactions at the various levels in the supply chain. (Simchi-Levi, 2004).

The supply chain, which is also referred to as the business network, consists of suppliers, manufacturers, warehouses, distribution centers, and retail outlets, as well as raw materials, work-in-process inventory, and finished products that flow between the facilities (Lyly-Yrjänäinen et al., 2010). The purpose of each entity of the supply chain is to perform activities that process raw materials and transform them from their initial state to a completed product that provides value to the end customer (Lyly-Yrjänäinen et al., 2011). A basic example of a supply chain being discussed is illustrated in Figure 7 below. Figure 7 below illustrates the supply chain for lubricants used in automobiles. The first stage of the supply chain is the raw material supplier where oil is drilled from the ground. This crude impure oil is then transferred to specialist suppliers i.e. oil refineries in this case which then process the oil into different components.



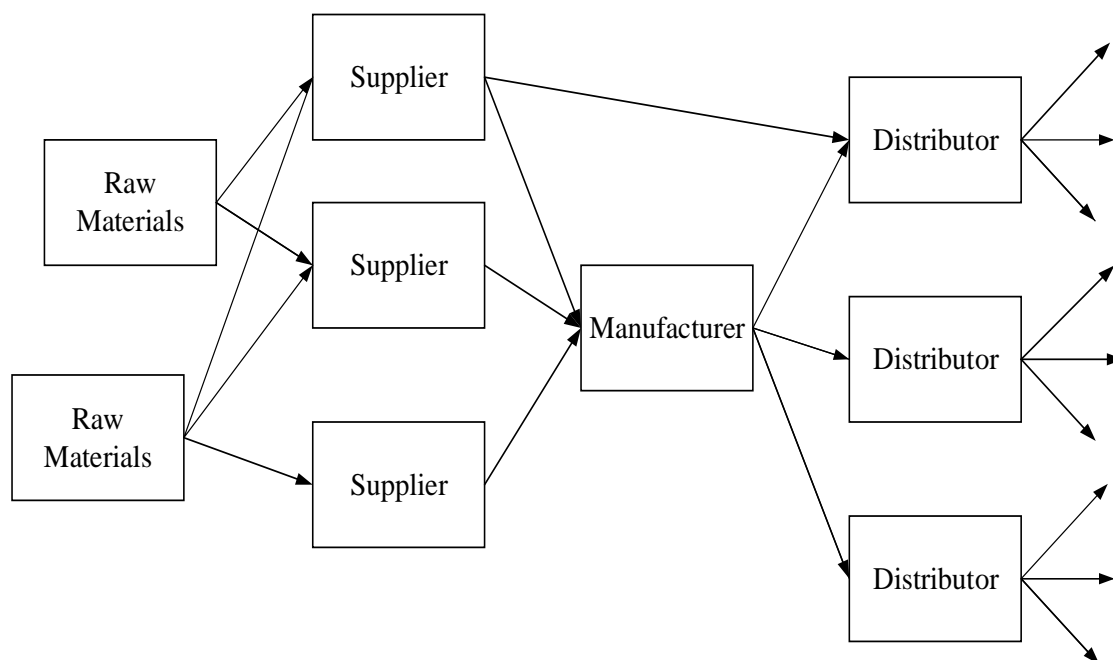
**Figure 7.** Supply chain network for lubricants.

A byproduct of petroleum is then transported to lubricant manufacturing company which then process this byproduct and converts into various kinds of lubricants. One of these is the brake lubricant. This is then packaged into bottles and transported to the customer of the manufacturing company i.e. automobile shop which stocks these products. The end customer i.e. the consumer then goes to automobile shop to purchase this lubricant for their cars.

The supply chain described above is very simple in nature in order to make it easier to understand what a supply chain is. However, in practical life, the scenario is never that simple. Normally a business would have multiple raw material suppliers, suppliers, manufacturers, wholesalers and delivery providers. More so, each of these would have further networks of its own that provide value to its operations. This supply chain working in unison as a complex group of companies to accomplish certain goals is defined as a Business Network (Ford et al. 2003). A core component of business networks is their multilayered relationships with each other. As previously identified, each entity within the supply network of a company has a supply network of its own. It was also identified that each entity has a value network of its own. This means that the supply network of each entity should work at its level optimum in order to ensure optimal value being provided by it to its customer (Lyly-Yrjänäinen et al., 2010). This makes business networks interesting. In terms of the same lubricant example, each entity within the supply chain should be working at its optimum to deliver optimum value to the end customer in the shape of automobile lubricants. However the complication lies in the fact that while a business can manage its own supply network, is it possible for it to manage network of its suppliers also? For instance the manufacturer of lubricants is also dependent on its Equipment Supplier i.e. supplier which provides it with manufacturing equipment. Point being that while the equipment supplier was not part of the supply chain



for automobile lubricants, it was however part of its business network as it had a profound effect on the value of the product. The complexity of business networks is illustrated in Figure 8 below.

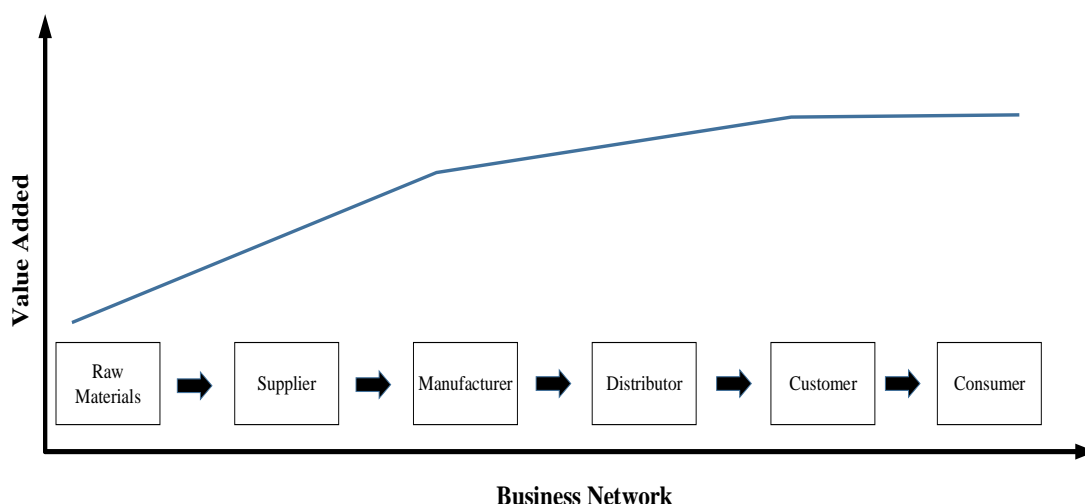


**Figure 8.** *Complex nature of business networks.*

Business networks take into consideration every facility that has an impact on cost and plays a role in making the product conform to customer requirements: from supplier and manufacturing facilities through warehouses and distribution centers to retailers and stores (Simchi-Levi, 2004). Indeed, in analysis, it is necessary to account for the suppliers' suppliers and the customers' customers because they have an impact on total performance and end customer delivery (Kaminsky, 2003).

More so, the objective of business networks is to be efficient and cost-effective across the entire system; total system wide costs, from transportation and distribution to inventories of raw materials, work in process, and finished goods, are to be minimized. (Forbes, 2012) Thus, the emphasis is not on simply minimizing transportation cost or reducing inventories but, rather, develop high quality products at the end of the value chain (Lyly-Yrjänäinen et al., 2010). This means that the success of delivering a final product to the end customer is heavily dependent on the complete network i.e. each entity with the supply chain and thus focus on business network management is a key function for every business to perform. The purpose of business networks exists to cater to the development and delivery of the value chain. It has been determined earlier that each Phase within the business network makes the product go through a process. From raw material to the final delivered product, every step of the way a value adding process is performed. This is specifically why there is a difference between the cost of crude oil drilled from the ground

and the final bottle of lubricant. The trend of the value added chain with respect to the business network is illustrated in Figure 9 below.



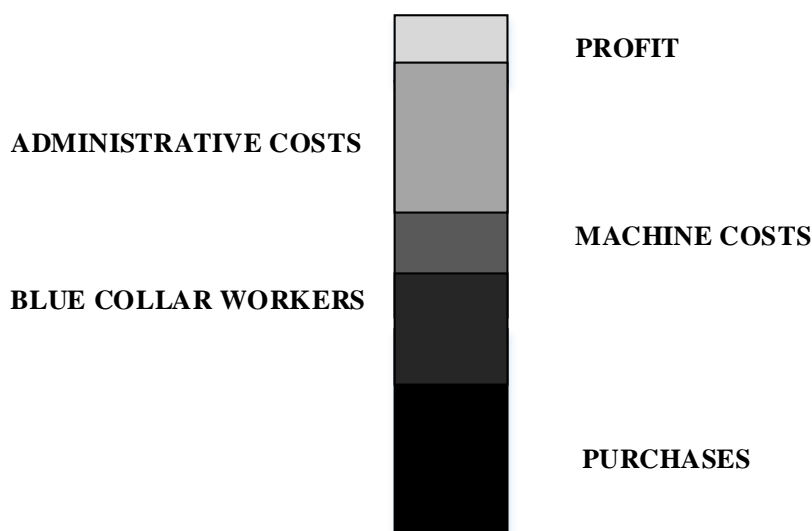
*Figure 9. Value added across the business network.*

Figure 9 clearly shows that along the business network the contribution of the value added on the product increases. This is the primary purpose of having a business network where a product is made to go through value adding processes done by industry specialists in their own field to deliver an efficient cost effective product to the end consumer. The success of a business network depends on how well each entity within it can perform its tasks providing value to the product but keeping the costs low. In order to truly understand and determine whether a business network is cost effective, it is important to understand what cost structures are, how they depict information and how they can be analyzed to determine whether a cost structure is cost efficient or not.

### **3.2. What are Cost Structures?**

In its simplest form, a cost structure of a business refers to the expenses that a company must be prepared to pay when manufacturing a product or providing a service, when placed in relation to the expected profit from the sales of said product or service. (MBACO, 2014) In other words, cost structures are a method to determine how much it will cost a company to manufacture a product and the amount of profit that a company would make once the product has been sold. (BD, 2015)

The cost structure of a company represents the expenses and the net profit on top of these expenses relative to the total amount of income received during a particular set period of time (Lyly-Yrjänäinen et al., 2010). The Figure 10 below illustrates the concept of a cost structure and how it depicts information relevant to a company, its costs and net profit.



*Figure 10. Basic cost structure of a company.*

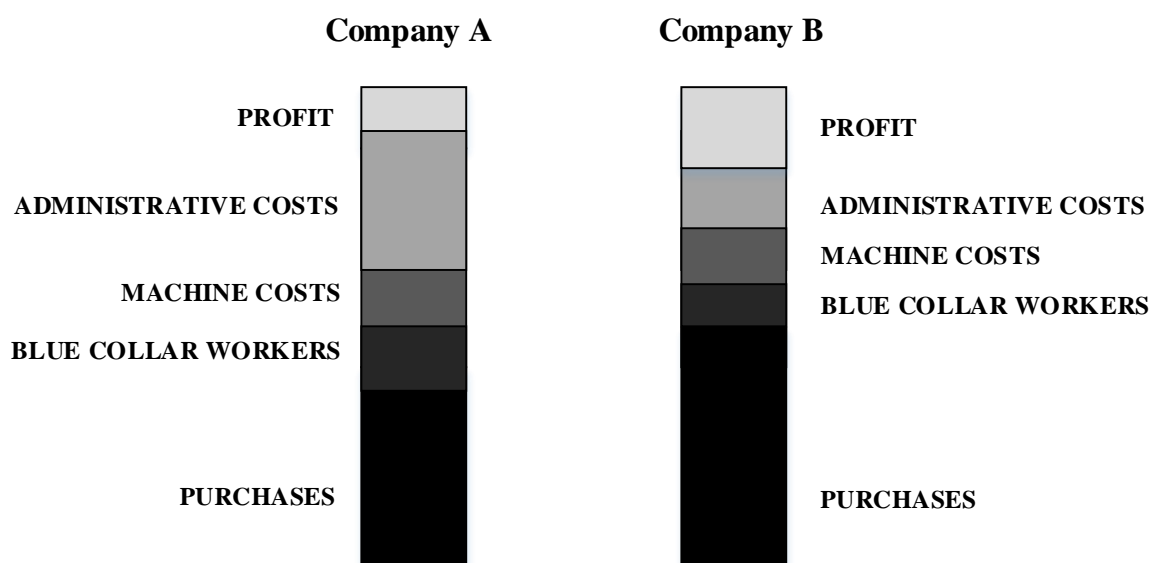
The first element is purchases and refers to all the material that the company needs to purchase from its supplier to get a product manufactured. Continuing with the same lubricant example, the crude oil coming from the raw material supplier to the manufacturer does not come for free. The cost at which this oil is purchased is represented in the purchases section of the cost structure. The second element i.e. Blue-collar work refers to the daily wages that have to be paid to ground level workers that turn these raw materials into usable byproducts and final products. The reason cited behind these workers being referred to as blue-collar is because traditionally this staff was dressed in blue overalls in factories giving them this name (Lyly-Yrjänäinen et al., 2010).

The third element i.e. Machine costs refers to the operating, maintenance and somewhat purchasing costs of machines that are required in order to transform crude raw material into the final product. This can be specifically tricky since usually machines are bought with one big down payment and their use continues for a number of years. However mostly these down payments are discounted and spread across the lifetime period of the machine. (Lyly-Yrjänäinen et al., 2010).

The fourth element is Administrative costs. This refers to all the various administrative expenses which a company incurs on a daily basis. These can include rent, utility bills, salaries of management, and other employees such as sales and product development. These types of employees are normally called white-collar worker. The name refers to the stereotypical white shirt and tie that people in administrative positions use (Lyly-Yrjänäinen et al., 2011). The fifth element is profit which depicts the amount of money which a company is making from its revenue.

All of these elements seen in Figure 9 are costs that are necessary to manufacture a product. In other words, these are factors of production necessary in order for the business to manufacture products that companies can sell in order to make a profit. Cost structures opens the window for companies to analyze their costs and determine which processes result in the highest costs. It also offers an interesting insight into other companies in order to see where their specialization lies. Cost efficient companies will always have cost efficient cost structures. Their analysis would give potential entrepreneurs interesting avenues to apply that cost effectiveness in other ventures in different industries.

As was discussed earlier, each element within the cost structure is a mandatory process required in order to manufacture a final product. This can also be understood that each process, processes that are also not incurring costs, add value to the crude raw material till the point when enough value has been added and the product is converted to an effective value creating final product for the customer (Lyly-Yrjänäinen et al., 2011). What is interesting though is that while each process performed might be necessary, it is not necessary for every business manufacturing the same product to have the same cost structure. This is because while some might prefer performing all value adding processes in house, others might opt to outsource some of the processes and focus on only those they feel add the greatest value to the product. This would lead to a scenario that while the final product might be the same, the cost of manufacturing for two different companies would be completely different. This is because industry has become a global market where products from all over the world are sold. Accessibility to different kinds of products, specifically those which are not available unless they are procured, requires companies to buy from external foreign countries. More so economically the world is split into different groups where certain belts offer cheaper labor and costs as compared to other countries. Such places offer an interesting opportunity to businesses that then consider using these cheaper resources elsewhere thus have an impact of their cost structure. Two companies A and C represent this specific logic and their comparison is illustrated in Figure 11 below.



**Figure 11.** Value added in the cost structures of two manufacturing companies.

As can be noted, there is significant changes in the cost structure of Company A and Company B while their final price of the product remains the same. The final price of the product is the total value of the cost structure in this case. As they are of the same height, it can be concluded that the final price is the same. It can be seen that Company B purchases a lot more than Company A. This naturally offsets its costs of wages for blue collar workers since it is purchasing pre-processed products from its supplier. This also reduces its administrative costs since it does not need to pay salaries for managers to overlook blue collar workers as much as it needed to beforehand. In this specific cost structure, the decision by Company B to outsource most of the manufacturing and purchase pre-processed goods increases its profit as compared to Company A. However it must be noted that this is just a generalization and such tinkering does not always produce good results. For instance while purchasing from offshore suppliers reduced purchasing costs, there is always the higher risk that the quality standards are different. Importantly Company B will not have to invest in managing teams offshore and their product development process will be heavily dependent on the offshore company. Failure to meet the industry standards or risks such as delay in delivery, poor communication and other geopolitical reasons can cause the whole business network to fail.

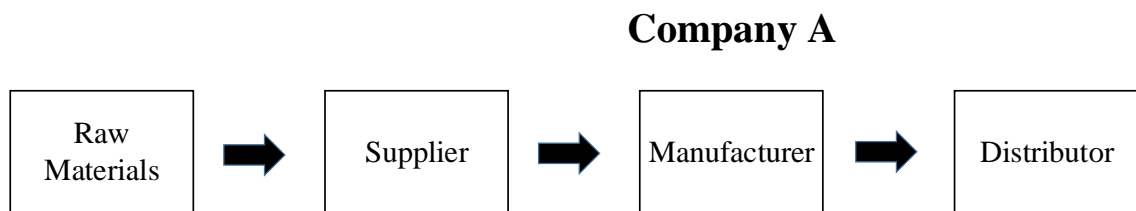
What is important to understand though is that by using offshore manufacturers, Company B has decided to add an entity to its current business network. At this point Company A was performing manufacturing value added processes in house and thus incurred a greater cost. In contrast, Company B has outsourced its manufacturing value added process and decreased the value added process that it performs by itself while keeping the total value added the same. Naturally this decision has had an impact on the cost structure of

Company B. This relates to what was discussed in the previous section about value adding processes incurring costs in a business network. This is further elaborated in the next section.

### 3.3. Cost Structures in Business Networks

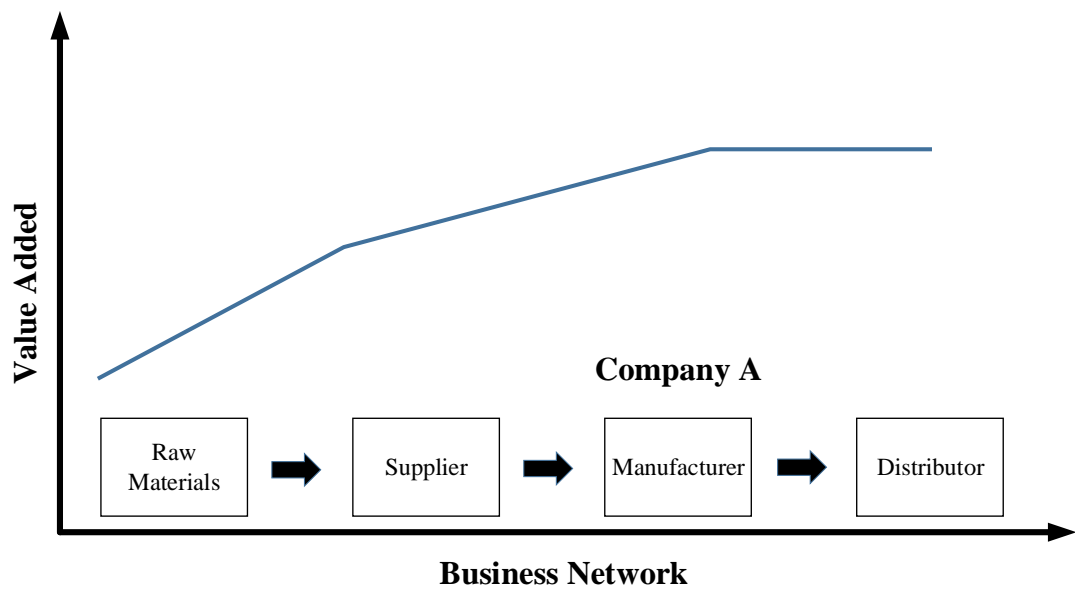
Businesses pursue cost structures according to their own chosen business models. Company A and B have different business models which can be seen by their cost structures. The question then arises why there is a difference in choice of business models. Is it just a simple choice or are these educated business decisions made after careful research and analysis.

Much like anything in business, these decisions are not made lightly and are the result of careful consideration. Each business has tries to focus on its own core competence, parts of the business it feels most confident in, and would prefer to stick to those tasks while outsourcing practically everything else (Ivanova, 2014). That is how supply chains and business networks are formed. Borrowing from the previous example, the business network for Company A is shown in Figure 12 below.



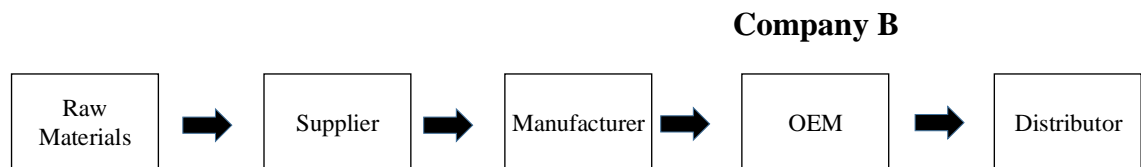
*Figure 12. Business network for company A.*

Company A is clearly a manufacturing company which buys materials from its suppliers. In this specific network, the both raw material supplier and the suppliers perform value adding processes on the product before Company A manufactures it and delivers it to the distributor for sale. As highlighted before, it keeps all the manufacturing processes in house as it is the business model it has chosen to follow. An illustration of the value added alongside network is shown below in Figure 13.



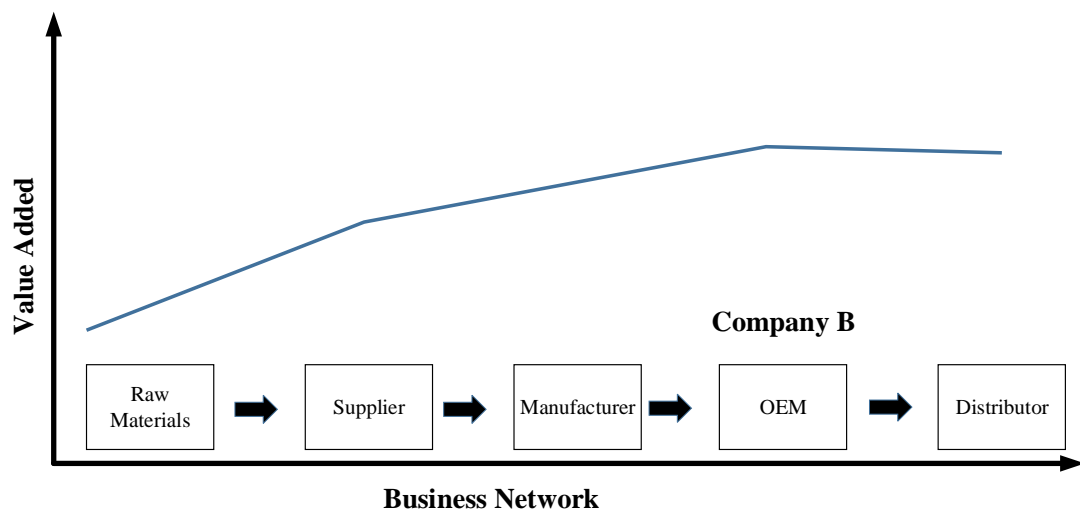
**Figure 13.** Value added across business network of Company A.

As can be seen, the value chain clearly increases across the business network of company A. In comparison the business network of Company B is shown in Figure 14 below.



**Figure 14.** Business network of Company B.

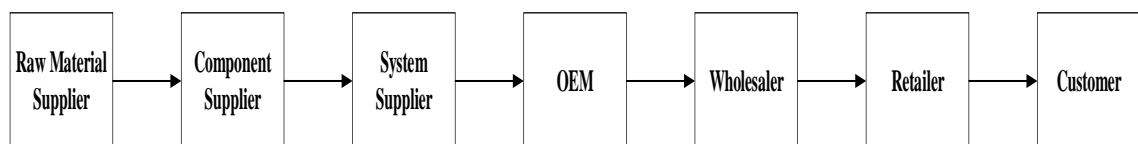
Figure 14 shows the business network of Company B and how it is altered its business model from a basic manufacturer to that of an OEM that gets some of its manufacturing done from an offshore company. That is why it has an extra entity in the form of manufacturer in its business network. The value adding trend for Company B is show in Figure 15 below.



**Figure 15.** Value adding across the business network of Company B.

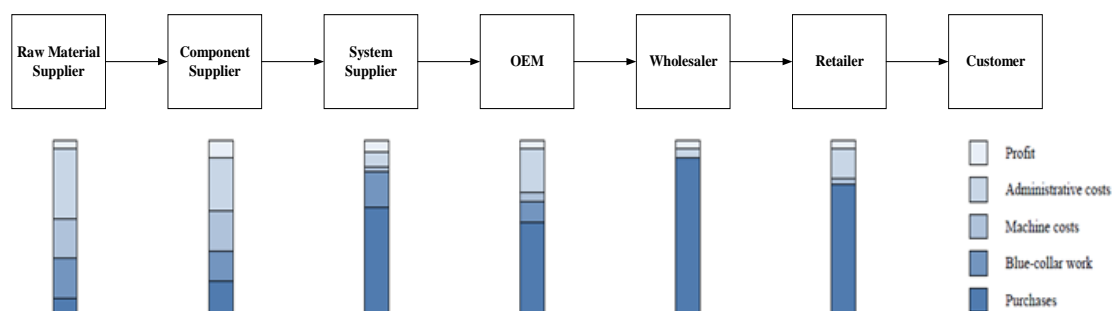
Similar to Company A, the value added trend increases across the business network. That is the basic purpose of the business network in the first place and Figure 13 and 15 highlight how value added always increases across the network. Another interesting thing in this particular case to understand is that the amount of value added remains the same in both cases while they both have different number of entities in their business network. This is not a rule however it does emphasize that same level of value added can be achieved using different business models.

It has been determined that each entity in the business network performs value adding processes to the material to convert it from raw goods to a final product. It can be inferred from this information that each value added process also has a cost. And since each entity in the supply network performs as a business itself, it should have its own cost structures. In other words, each entity along the business network has its own cost structure which contributes to the cost of the final product. Figure 16 below illustrates a basic generalized supply chain or business network in the car manufacturing industry. Figure 17 then illustrates each entity in the business network with their respective cost structures.



**Figure 16.** Basic supply chain for car manufacturing company.





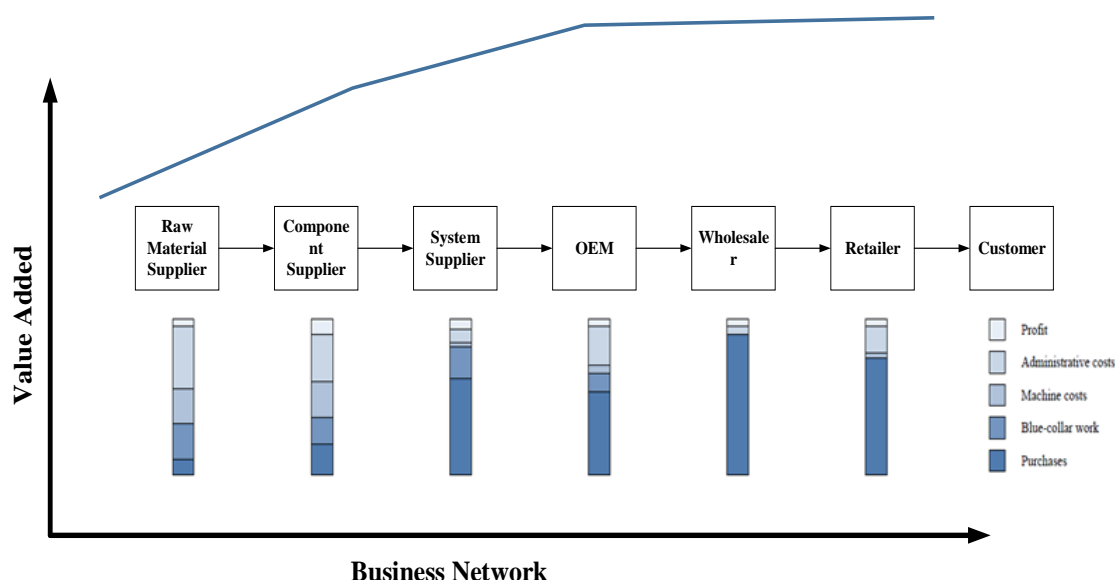
**Figure 17.** Basic supply chain for car manufacturing company and its cost structures.

Figure 16 depicts a basic supply chain network for a car manufacturing company. As can be seen, the network is very simplistic in nature. This is done to make it easier for the reader to understand the example. The network consists of the raw material suppliers which deliver materials such as steel and iron for cars. This material is then processed by the component supplier which transforms this steel into usable parts such as spark plugs and doors. Similarly there are system suppliers that manufacture bigger components such as engines, brakes and even stereo systems for the car. All of these are then provided to the OEM i.e. Original Equipment Manufacturers that put everything together and have an operating final product ready for use. This product is then taken by a logistics company and delivered to the wholesaler or retailer who then sells it to the end customer.

The important thing to note though is that each entity within the network has specific value adding processes to perform on the product before it is bought by the end customer. This is important and Figure 17 illustrates the cost structures of all these entities within the supply network. An interesting, and expected, trend to note is that purchase expenses increase along the supply chain except for the retailer. For the sake of this example, the retailer essentially gets a lower price for the car than the wholesaler since it has to pay management salaries which form a significant chunk of its cost structure. It is also interesting to note how machinery expenses are drastically reduced along the supply chain. Steel and petrochemical industries are both very capital intensive, which means that large investments are needed for purchasing the production machinery and facilities.

The important outcome from the cost structure components of the business network of car manufacturing industry is to understand that each element within the network has certain processes it has to perform and cannot avoid. These processes incur huge costs. For instance the machine costs for the raw material supplier are significantly high. This is because the raw material supplier needs to buy large scale specialist equipment to process steel which is extremely cost intensive. The effectiveness with which it can then do all its other processes and also procure machinery has an effect on the complete supply chain. For instance in case there was a breakdown in its machine equipment and it had to procure more expensive equipment as a replacement. This would increase the overall cost

of its value added process which in turn would increase the costs throughout the supply network. This is where cost management within the business network becomes very important. An illustration of the value added trend for the car industry is shown in Figure 18 below.



**Figure 18.** Value adding across the business network of car industry.

The example above does not consider how varying multi layered elements come into play in business networks. In such circumstances, a particular retailer might end up earning more profit than the other. This sparks competition. An analysis into their cost structure would reveal exactly why one is more profitable than the other. The existence of these disparities of profit between different entities at the same level of the supply chain within a business network highlights how important cost structure decisions can be in connection to the profitability of the company (Ivanova, 2014).

A simple choice as to outsource certain processes might give a business a competitive advantage over the other by making more profit. Furthermore there are always processes within a business function that are undesirable since the company is not competent in handling them (Kaminsky, 2003). These processes within the business model of a company which might engage in high costs and are considered undesirable are called Road Blocks. Analyzing cost structures of businesses/industries offers a concrete option to identify road blocks so that changes to business models can be proposed. This is discussed more in the section below.

## 4. USING COST STRUCTURES TO REMOVE ROADBLOCKS

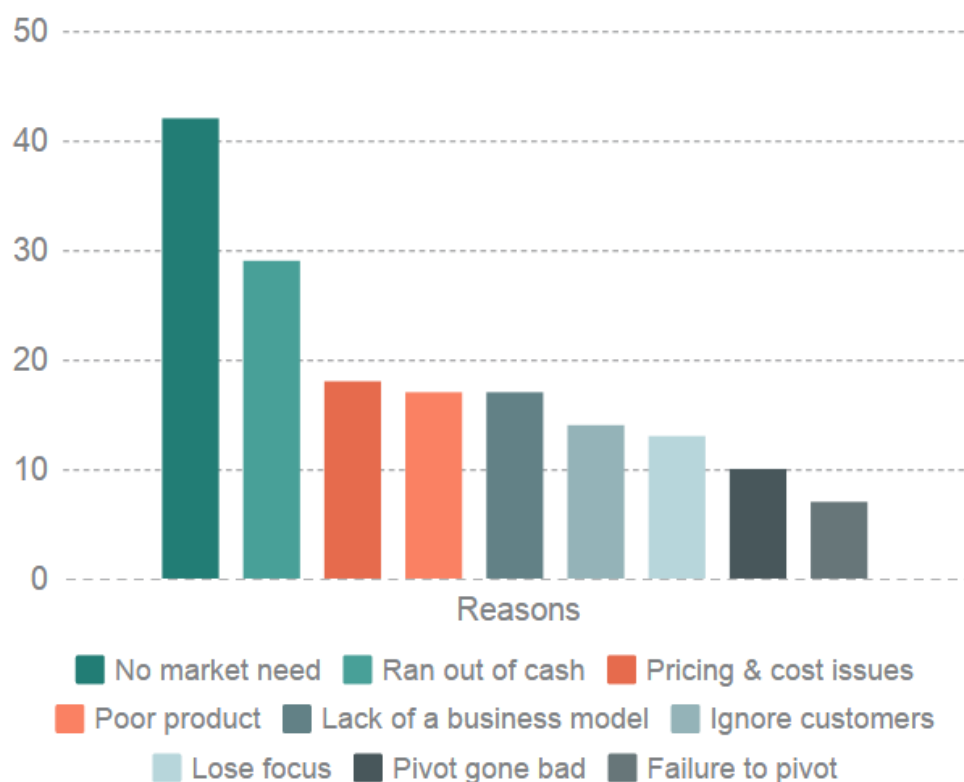
### 4.1. Innovation not seen as an iterative process

Most companies fail. It is an unsettling fact for bright-eyed entrepreneurs, but old news to startup veterans. (Hirai, 2010) Experienced entrepreneurs know that running a company that eventually fails can actually help a career, but only if the executives are willing to view failure as a potential for improvement. The statistics are disheartening no matter how an entrepreneur defines failure. (Nobel, 2011) If failure means liquidating all assets, with investors losing most or all the money they put into the company, then the failure rate for startups is 30 to 40 percent, according to Shikhar Ghosh, a senior lecturer at Harvard Business School who has held top executive positions at some eight technology-based startups. If failure refers to failing to see the projected return on investment, then the failure rate is 70 to 80 percent. And if failure is defined as declaring a projection and then falling short of meeting it, then the failure rate is a whopping 90 to 95 percent. "Very few companies achieve their initial projections," says Ghosh. "Failure is the norm." (Nobel, 2011)

Startups often fail because founders and investors neglect to look before they leap, surging forward with plans without taking the time to realize that the base assumption of the business plan is wrong (Hirai, 2010). They believe they can predict the future, rather than try to create a future with their customers. (CBInsights, 2014) Entrepreneurs tend to be single-minded with their strategies rather wanting the venture to be all about the technology or all about the sales, without taking time to form a balanced plan (Nobel, 2011). Any individual or group pursuing entrepreneurship should first familiarize themselves with the market and also theoretical and practical literature available in the market identifying the challenges which startups face (Patel, 2015).

The desire to become an entrepreneur is growing. While this is a good thing since successful new businesses add to the economy of their country and also provide a source of living for many people in terms of jobs created, it can also be a bad thing since most businesses are financed through loans mostly from banks. Continuous bankruptcy with no pay out for the owed amount is a negative reality of the industry. Its impact is felt both on an individual and country wide level (Patel, 2015). Thus while initiating any kind of move to become an entrepreneur, it is important to familiarize with the common reasons why most startups fail. For the purpose of this thesis, and for simplicity, only the reasons of failure that can be tackled through the business model canvas and cost structure analysis will be discussed. Personality issues not related to the business model canvas

such as losing focus, lacking passion and not exploiting a network are roadblocks to success which no framework can solve. These are traits that need to be solved consciously through self-reflection and action. However all the rest are present in the canvas and can be identified once careful evaluation of the model is done through the framework.



**Figure 19.** Top reasons why startups fail (CBInsights, 2014).

The biggest downfall statistically for businesses is that their focus is on building a solution while looking for a problem, i.e., not targeting a market need (Nobel, 2011). When entrepreneurs concentrate on tackling problems that are interesting to solve rather than those that serve a market need, failure becomes almost inevitable. That is at least why 42% of cases failed. (Nobel, 2011) While it may be fun to chase around solutions for problems one might feel is interesting, at the end of the day a cash inflow through the customer's pockets is what defines the success of the company. Treehouse Logic (2010) wrote in their post mortem analysis of the failure that startups fail when they are not solving a market problem. They were not solving a large enough problem that could be universally sold as scalable service. They had developed a great service offering great technical service with great insight into their product. They also had a talented assortment of members and advisors which were experts in their respective field. However what they lacked was a model that was tested beforehand in the market and fit the market need. (Treehouse Logic, 2010)

Another downfall for startups is their tendency to run out of cash or money. Time and money are always scarce resources specifically for startups and should be dealt with very carefully. Questions about how money should be spent and how resources should be allocated are very important. Failure to allocate resources properly is the second biggest cause of failure in startups (29%) (CBInsights, 2014). The best case to explain this situation is the example of Flud, a social news reader for mobiles. (Flud, 2013) Flud's ambitious growth unfortunately was not met by their funding demands. Failure to secure funding eventually led them to running out of money and eventually closure. (CBInsights, 2014)

Similarly, Pricing/Cost issues also form a major reasoning for failure of startups. Pricing is often a complicated and important part of a business model for startups and their success depends on how successfully they are able to manage it. (CBInsights, 2014) Delight IO, a user recording based company for feedback, closed in January 2014 citing pricing difficulties as their major reason behind closing. (DelightIO, 2014) Delight IO later acknowledged that even with their most expensive monthly plan of US\$300, customers never claimed about the price itself. However the price did not match with the expectations that the price set. Failure to meet customer expectations set by pricing led to their eventual closure. (DelightIO, 2014)

Another reason for failure is having a poor product. A product becomes a bad product if it is designed to have a feature set which is appealing to the entrepreneur but not to the customer. GameLayers, an online game development company, later acknowledged that their product user interface held too many features which they felt were necessary but lacked the core game compulsion to drive enthusiastic mass adoption. (Gamelayers, 2009)

Similarly another major reason for failure is not having a good business model. Practically all startup founders agree that business models are essential for the success of a business. A bad business model that does not reflect the values of the business and the market can significantly lead to a startup failure. Tutorspree is an interesting example which saw great success in the start yet failed to scale up. This was because their primary business was based on a single channel and could not handle the increase the demand. (Tutorspree, 2013)

As identified before, ignoring customers is quite similar to developing the wrong market fit. Ignoring customers generally refers to being flexible and not iterating the products development according to the will and opinion of the customer. (CBInsights, 2014) Tunnel vision and not gathering user feedback are fatal flaws for most startups. For instance, eCrowds, a web content management system company, explained that their primary focus was to develop a product which they would like themselves. This

eventually put them in to the tunnel vision trap which made it impossible for them to be truly objective. (eCrowds, 2011)

Losing focus refers to getting sidetracked by distracting projects, personal issues, and/or general loss of focus was identified by CBInsights (2014) as a significant 13% contributor to failure. MyFavorites, a social media app, explained after their closure in 2011 that ultimately, the company lost interest in what it was doing with the team asking themselves whether they really wanted to continue or not. This loss in focus resulted in the company losing direction and eventually having to close down. (Poland, 2011)

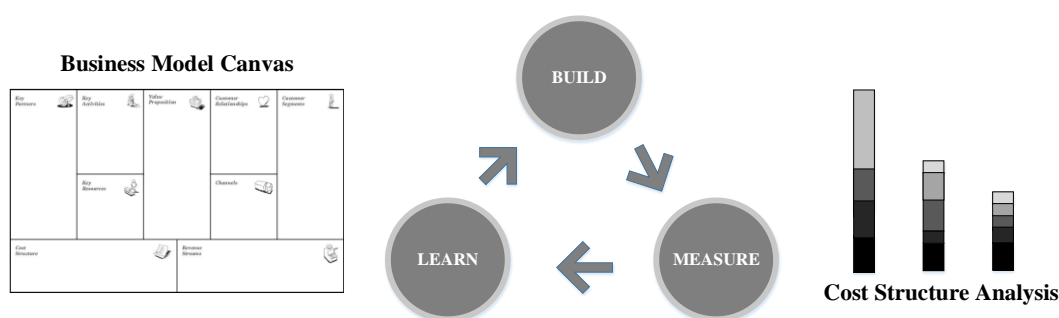
Another interesting failure point for startups is pivots going bad. While identifying that a pivot needs to be made does show that the entrepreneur is studying the market carefully and analyzing feedback, success stories are not always as success as Burbn to Instagram was. One step in the wrong direction and the pivot can actually quicken the failure process for an entrepreneur. (CBInsights, 2014) Similarly while the wrong pivot might put an end to a startup, failure to pivot at the right time will also have similar consequences. Failure to pivot at the right time and not diverting attention from processes which were unnecessary amass to 7% of the reasons why startup fail. Pursuing an idea which is not practical loses the entrepreneur time, resources and money. These are all things an entrepreneur does not have an abundance of. Keith Nowak from Imercive, a social media marketing company that went down in December 2009 noted that they were caught between a mid-pivot. Essentially they were stuck between a strategy which they knew would not work and a strategy which they knew would. (Nowak, 2013) The inertia against moving forward while fighting with the commitment to move forward was eventually too morale sapping and led to the company's failure.

Being rigid is an entrepreneur's downfall and thus it begs the question why entrepreneurs tend to be so rigid. An explanation is offered by the LSM itself where entrepreneurs focus mostly on the first two aspects of the methodology i.e. Find and Quantify Problem and Find and Quantify Solution. Business models are tailored through the determined solution and then stuck to rigidly since the entrepreneur believes that the solution has been quantified and will work in the market (Campbell, 2014). Current literature focuses on highlighting that when the determined solution is tested in the market and fails to get quantified, that is when the entrepreneur needs to reflect on the feedback and alter their offering and perhaps even head towards a pivot. This is fair however while the iteration at this level is not in question, it is fact that while the solution might remain the same, the method by which an entrepreneur provides that solution to the end customer is also up for iteration.

An example of a take away service which has quantified the market need for customers to be able to get restaurant food delivered to their homes is taken into consideration. While the customer requirement has been quantified i.e. need for having restaurant quality food

at home, and the solution determined i.e. delivering food to customer's homes in 30 minutes, it is still under question which business model the entrepreneur choses. For the sake of the example, the entrepreneur uses a car to deliver food yet finds that parking is a big hassle in the neighborhood and ends up eating a lot of time making thirty minute deliveries a problem. The roadblock here becomes the time period promised. This problem is neither part of the problem or solution analysis and is rather part of the third stage of LSM i.e. Business Model Validation. The entrepreneur switches to uses bicycles to deliver food to customer which boosts delivery time accuracy and also adds a layer of value to the business advocating 'sustainability' to the customer.

The above identified roadblock is delivery time. However it is important to understand that roadblocks can appear in many different forms. What works is the use of the Build Measure Learn model while seeking a resolution. The essential toolkit for entrepreneurs to resolve roadblocks in its business is presented in Figure 20 below.



**Figure 20.** Three essential tools for entrepreneurship.

In order to build anything, the entrepreneur requires business model development which is done through the business model canvas tool. As explained earlier, the business model canvas framework equips the entrepreneur with the tools to close in on what elements within the business model need to be taken care of and given special attention. However just building a model using the business model canvas is never enough. Once a model or a solution has been built, it then has to be tested to make sure of its functionality. This process is referred to as measuring of the business model. One of the most significant tools in measuring a business model is cost structures which was discussed in detailed in the previous chapter. Using cost structures, it is possible to analyze whether a specific proposal or solution is feasible or not. It can also highlight various issues from which the entrepreneur can learn what to do. Using this cost structure, iterations to the business model and the business model canvas can be made. This process is then called the learn process where the things highlighted through the measurement Phase are put into the model itself. This framework to iterate changes within the business model is showing in Figure 21 below.

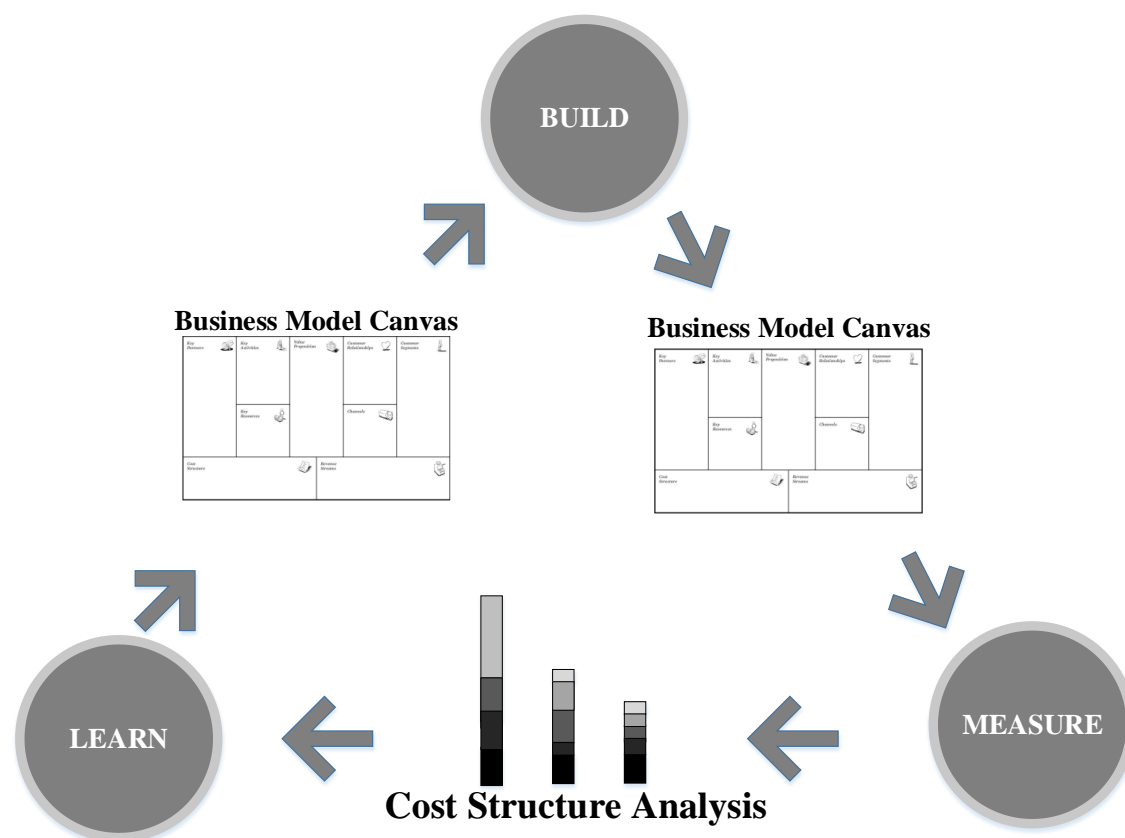


Figure 21. Framework for iterating changes in the business model.

This iterative framework is built with the objective that every decision that business makes regarding its business model is run through the framework to ensure that the results are satisfactory. Furthermore the objective of the framework is to help the entrepreneur in identifying cost based roadblocks and to determine relevant alternatives for the resolution of the roadblocks. Once determined, these roadblocks are also put through the framework to ensure their effectiveness.

In the next section, a relevant definition for road blocks alongside their resolution alternatives is discussed.

## 4.2. Roadblocks and their resolution

So far throughout the thesis there has been a mention of roadblocks yet no formal definition the subject has been given. This is because there is general disagreement on how a road block is defined. The term roadblock is borrowed from the traffic term roadblock which specifically means a barricade or an obstruction on the road which prevents the traffic from moving forward (Oxford, 2015). Similarly roadblocks are also security measures taken by the police or the army to prevent people from entering a certain area (Webster, 2015).



The definition of roadblocks for startup business is quite similar. When the development of a startup is seen as a road and it is easy to understand what a roadblock or roadblocks is referring to. Any process or factor that effects the conception, incubation, growth and overall success of the company is referred to as roadblocks. In other words, if the business wants to do something and cannot do it, the reason why it cannot achieve what it set out to do is referred to as roadblocks.

Since businesses behave like organic organisms, roadblocks can be divided into two specific categories. These are (Wilder, 2015):

- Psychological
- Physical

Psychological barriers or roadblocks refer to the traits of personality of the entrepreneur, team or organization that restricts success. Psychological roadblocks can be further split into the following categories (Wilder, 2015):

- Personal bias
- Fear of failure
- Team behavior
- Team communication
- Motivation
- Perfectionism

Personal bias refers to the psyche of the startup team. Personal bias towards a certain solution without validation from the market is a common roadblock as it prevents the company from moving forward. Personal bias puts the emphasis on the company to develop solutions that they feel are good while the market might show otherwise. This is a waste of resources and a major roadblock. Similarly fear of failure prevents the company from taking risks and trying out something new. Startups is a risk based industry and there is a lot to be gained through risk. Not taking risks instead of keeping the business safe ends up losing the company money. The market keeps on evolving and this evolution has a lot to do with how businesses take risks and end up altering the market altogether. (Wilder, 2015)

Team behavior and communication are also two psychological traits. The success of a team is based on how well they get along together and effectively communicate. Failure to do so results in slow progress if not failure of the company altogether. Thus this is a major roadblock. These factors also have an impact on the motivation of the team. An unmotivated team in turn delivers poor results and fails to effectively perform its everyday tasks. As a result the business will find it difficult to be successful. (Wilder, 2015)

Finally there is perfectionism. Aiming to have the perfect product is never a bad thing however entrepreneurs fail to keep in mind that for each individual a perfect product is different (Wilder, 2015). Too much emphasis on the product being perfect for the development team ends up producing a product which is very imperfect for the end customer. Thus it is always better to develop a product that fits the general needs. Perfectionism in this case is a roadblock as it limits the entrepreneurs to understand their customer.

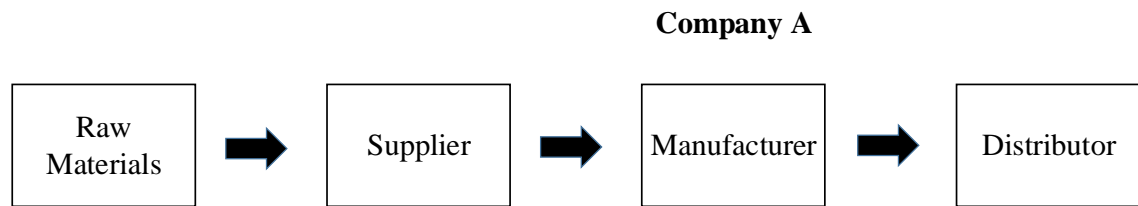
As opposed to psychological roadblocks, there are also physical roadblocks. Physical roadblocks have already been discussed in the previous section and thoroughly elaborated on. For the purpose of this thesis, the focus will remain on physical roadblocks instead of psychological ones.

After having understood what roadblocks are and their different types, it is now important to consider how these road blocks can be resolved. Since the scope of the thesis to be centered around cost structures, the focus on the specific roadblocks and their resolution will be through cost structure analysis. Thus the three different alternatives available to resolve these cost structure relevant roadblocks are:

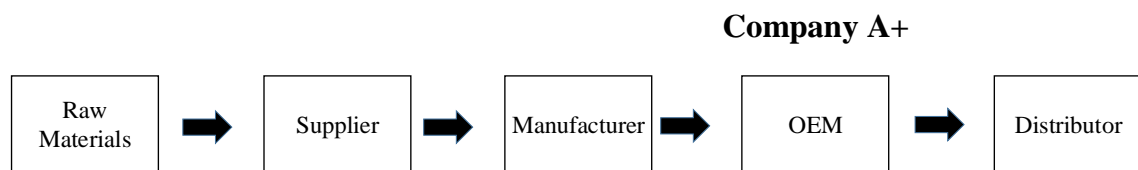
- Outsourcing
- New Technology
- Innovation

Power et al. (2006) advocates that outsourcing comes from two separate words - “out” and “sourcing”. Sourcing is defined as “the act of transferring work, responsibilities and decision rights to someone else”. The trend is that companies nowadays outsource tasks because there are others who can do it cheaper, faster, and better (Power et al. 2006) Ashley (2008) defines outsourcing as “the allocation of risk and responsibility for performing a function or service to another entity”. In brief, outsourcing can be defined as the process of delegation of operations or jobs to the third party, which can do it more efficiently, cheaper and accurately. Outsourced tasks are usually handled by experts in that particular field to guarantee quality output. (Tayauova, 2012)

Having understood what outsourcing refers to, it is important now to understand how outsourcing can be used as a tool to eliminate roadblocks. From the definition, it is easy to assume that outsourcing will be used in the capacity that the tasks which are roadblocks for the organization are then outsourced to an external party. In general terms that is how it works. The Figure 22 below represents the business network of Company A and Figure 14 represents the business network for Company A+.

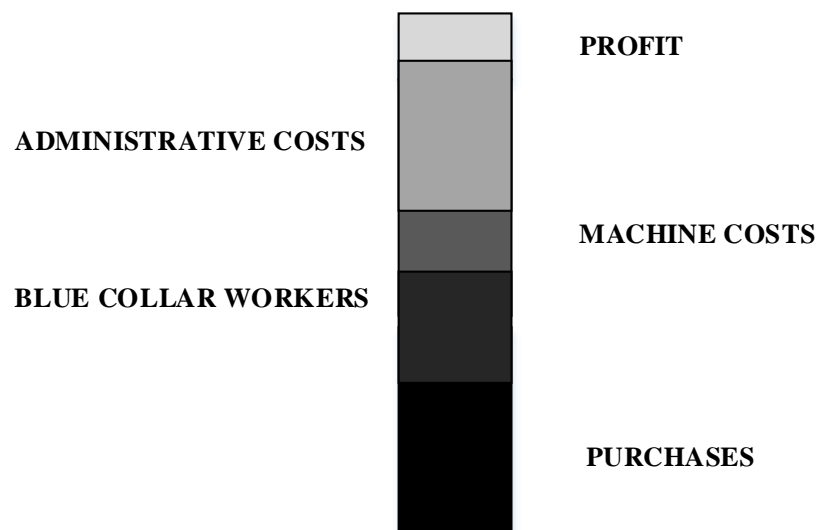


*Figure 22. Business network for company A.*



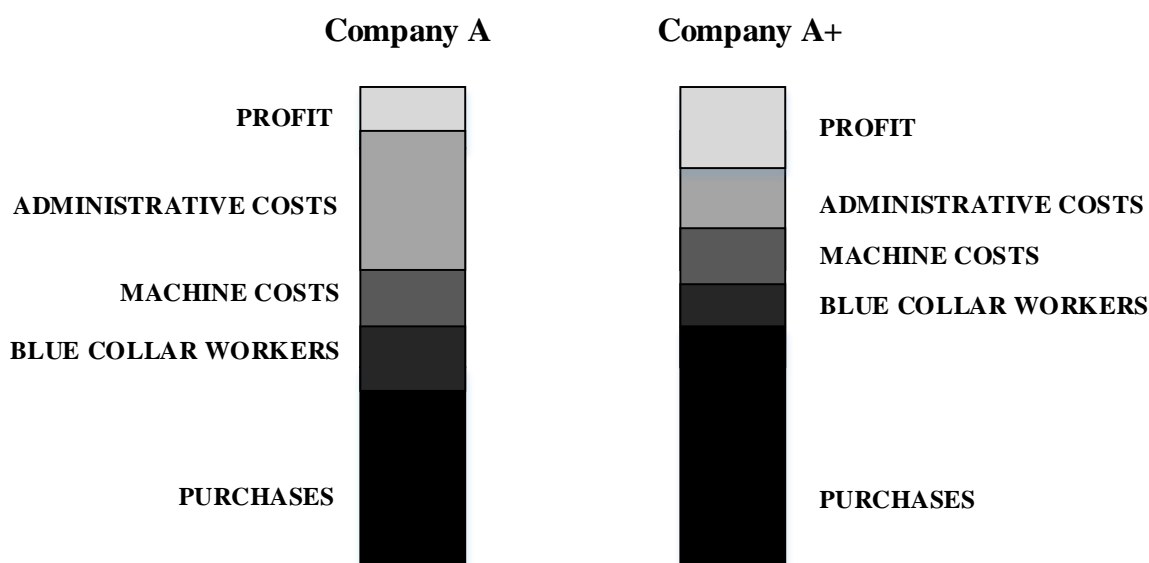
*Figure 23. Business network of Company A+.*

Company A+ represents an iterative transition for Company A. This transition is a good example of how outsourcing works and can affect the cost structure of a company. Similar to the earlier scenario from Chapter 3.3, Company A is a manufacturing firm with excessive manufacturing costs. Its cost structure is presented in Figure 24 below.



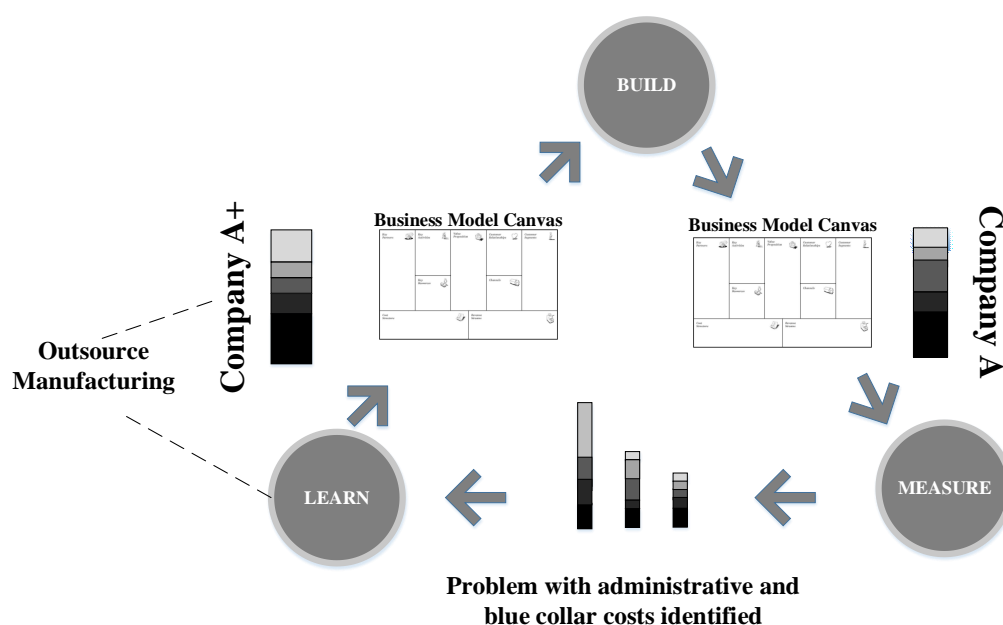
*Figure 24. Basic cost structure of a company.*

Company A has excessive costs for blue collar workers specifically in the manufacturing process. It is looking to solve this situation by outsourcing most of its manufacturing activities to an external manufacturer as seen in Figure 23. The resulting cost structure is shown in Figure 25 below.



*Figure 25. Value added in the cost structures of Company A and A+.*

In terms of transition, it can be clearly seen that by pursuing outsourcing and buying manufactured goods instead of manufacturing them in house, the company has drastically reduced its blue collar and administrative costs. This is mainly because of the reduction in salary costs which the company has to pay for managers who oversee and manage blue collar workers and the blue collar workers themselves also. However buying manufactured goods increases the purchasing costs for the company. Overall even with the increase in purchasing costs, naturally since the company is now buying value added serviced products, their profit has doubled. Figure 22 below shows how the iteration towards outsourcing took place with the use of the framework from Figure 21.

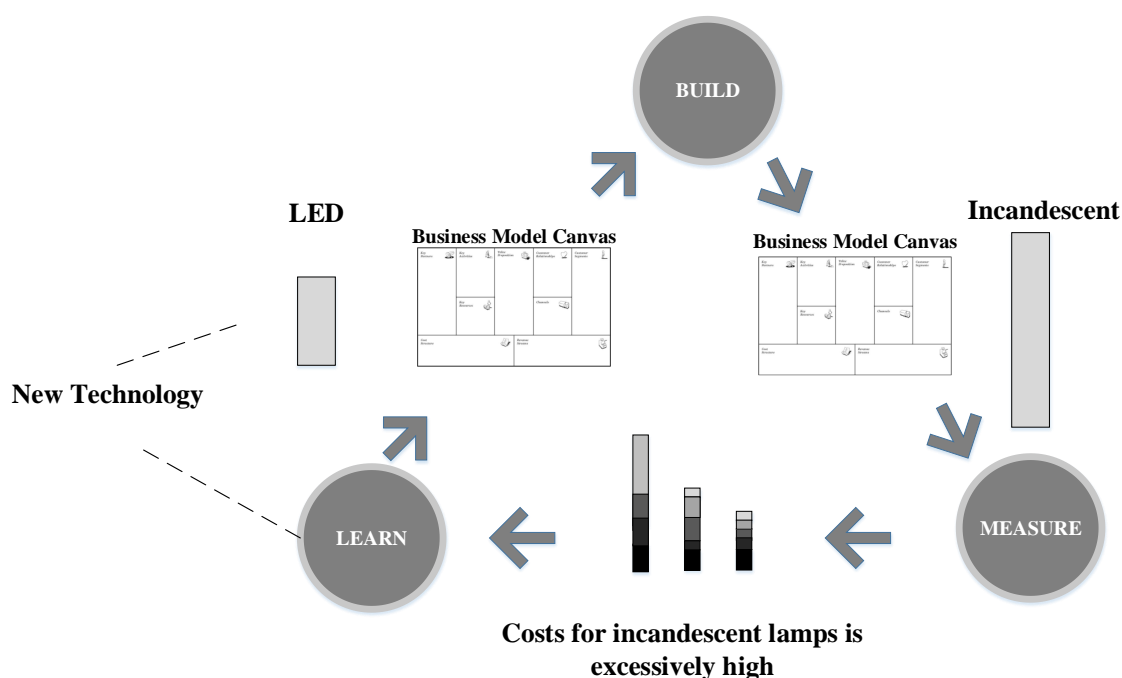


*Figure 26. Company A and its transition to Company A+ through outsourcing.*

The example illustrates how analysis of a company's cost structure can be used to identify significant road blocks in its road to success, e.g. blue collar work and administrative costs in this case. It also highlighted how cost structures can then be used to evaluate the alternatives for solving a roadblock and making a decision on which direction to go. An important thing to consider however is that cost structures only offer insight into how different processes effect the costs of a product or service. In a business environment, there are a lot more factors to take into considerations than just costs if a successful business model is to be developed. For instance, in the case of Company A, although Option A+ offered a better financial alternative, it does come with the risk of being dependent on the installation provider's expertise and not being in control of the quality of the delivery and service. In the service industry, customers sometimes do value quality over price especially when the price difference between the two can be insignificant. This means that while costs are important, they are not the only variables that businesses need to consider while altering their business models.

As an alternative to outsourcing, there is the option of using new technologies to help make the business more efficient and as a result lead to the removal of business roadblocks. New technologies refer to the developing or developed technologies, process or systems on offer that have the ability to substantially alter business or social environment of the industry (business dictionary 2015). New technologies can come in many shapes, sizes and varieties. For instance new technology can be information technology, wireless data communication, automated industrial machines, advanced robotics, medicinal discoveries, scientific frameworks and knowledge to name a few.

In terms of implementation of a new technology, the example of lighting systems is considered. Previously in industrial warehouses the light systems comprised of normal incandescent lamps which consumed significant amounts of energy. However in the recent past, with the advent of LED and green technology, majority of these warehouses have replaced the old technology with green LED technology resulting in significant cost savings for these businesses. The savings amount to a massive 75% reduction in energy costs by these lighting systems (Dholakiya, 2015). This meta-analysis within the cost structure of the whole warehouse can also be studied through the framework determined in this thesis. It is represented in the Figure 23 below.



**Figure 27.** Transition from incandescent to LED systems.

The Figure shows that the company identified through measurement via the cost structure analysis of its business model that the costs for incandescent lamps were far too high. With this knowledge the company checked alternatives in the market and determined that using new technology in the form of LED system will drastically reduce costs by 75% in terms of energy usage of these systems. It thus made the iteration and developed a new iterated business model.

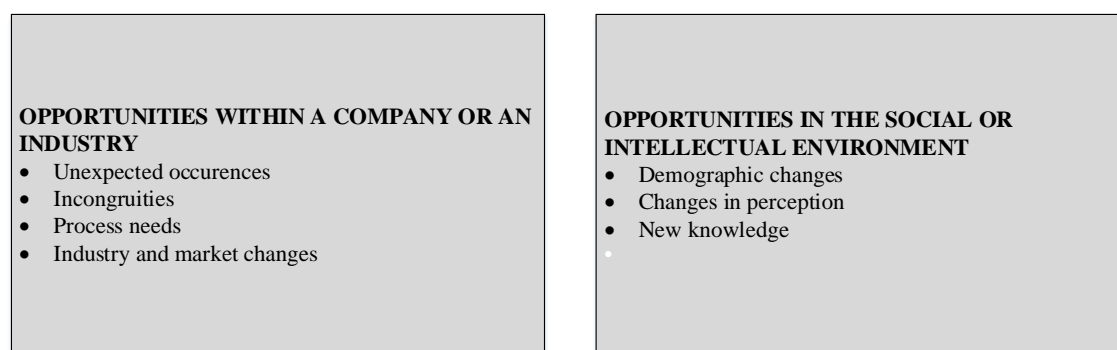
### 4.3. Roadblocks removed through innovation

Traditionally outsourcing and new technology has been the way forward in terms of removing roadblocks from a business model. However major industry breakthroughs have been made by using innovation as a means to remove roadblocks altogether. Drucker (1985) defines innovation as the practice of creating new wealth-producing resources or using current resources with enhanced potential for enhancing wealth: it is the aim to create purposeful, focused change in the potential of the company. Developing new systems, processes and products can not only lead to startup technologies but also be used internally to solve roadblocks which a company is facing.

Drucker (1985) divided innovation into two specific subcategories which he referred to as opportunity sources. Innovations can come out of nowhere but those are rare and far between however through a conscious and purposeful search, it is possible to iterate innovation. The two specific subcategories in question are:

- Opportunities within a company or an industry
- Opportunities in the social or intellectual environment of a company

Drucker (1985) identified four areas of opportunity that exist within a company or industry. These are the unexpected occurrences, incongruities, process needs and industry and market changes. In addition to these, he also identified three sources of opportunity that exist externally in the social and intellectual environment, which are demographic changes, changes in perception and new knowledge. He emphasized that innovation can be an iterative process driven through need. Very rarely does innovation come out of nowhere. However in the case when there is a necessity then it is highly likely that an innovation is determined. These two subcategories further describe how an innovation can be determined by an individual, company or enterprise. These are illustrated in the Figure 24 below.



**Figure 28.** Sources of opportunities (Drucker 1985).

The first opportunity for innovation within a company or industry comes from unexpected occurrences. The compound UK92480 known as Viagra, is a good example of an unexpected failure. In the R&D Phase, UK92480 was being primarily tested to relax blood vessels as a cure of angina but, instead, it proved far more effective in relaxing the penile blood vessels resulting in erections in men. This particular “side effect” only became apparent when test subjects refused to bring the drug back. (Jay, 2010) This proves that while a product might be intended for something else, an unexpected occurrence can still happen making it an innovation. According to Chesbrough (2008), this situation is referred to as a false negative, since the objective of the product failed yet it succeeded in something completely different.

The second source of opportunities is incongruities. This generally refers to the contradictions in the logic of a process, difference in results and expectations and economic realities of the industry, market or company. For instance in the case of the cataract operation, surgeons were hesitant to perform one specific part of the operation in the 1960s as its expertise were very different from what they were specialized in. This led to the automation of this operating procedure rendering the need to perform that task

manually unnecessary. Alcon, the group that derived this innovation, be so successful that it eventually became a monopoly. (Drucker, 1985)

The third source of opportunity is process need. Process need opportunities refer to those innovations that are created primarily because the existing process set up is deemed insufficient to provide enough value and convenience. Thus new process, techniques or technology is innovated to support existing process and needs. A good example is the development of the ATM and Internet banking. This was developed in order to cater to the demand of the customers who wanted to do their banking more conveniently even after office hours (Janakiram & Rizwana, 2011). Improving current processes to support customer requirements is a plausible method for determining innovation.

Another important source of opportunity comes from industry and market changes. These are changes in the industry that occur during a period of time. Drucker (1985) argues that when an industry grows by 40% in a period of up to ten years, massive structural changes take place. Market leaders tend to stick by their product since they have been working well in the past. This defensive mentality leads to them ignoring the changes in the market leading way for a newcomer to invest in the prospective innovation and take the market away. This is why Drucker defined market and industry changes as ones that bring tremendous opportunities to new players. (Drucker, 1985)

Alternatively, there are also drivers or sources of opportunity in the external social or intellectual environment of a company that drives innovation. The first opportunity from this group is demographic changes. Demographic changes refer to the change in the number of people, their age, distribution, education, occupation and geographic location. This information is easy to get and thus innovation driven through these factors is considered reliable and less risky (Drucker, 1985). There is increased awareness within society, through improvement in social welfare and medical technology, that baby boomers are ageing which will lead to an increase in product demand for the elderly rather than for babies. This creates an opportunity for companies developing products for the elderly to concentrate on their work and derive innovations to lead the market when this trend sparks. This has already been seen in Japan. (Kohlbacher & Herstatt, 2008)

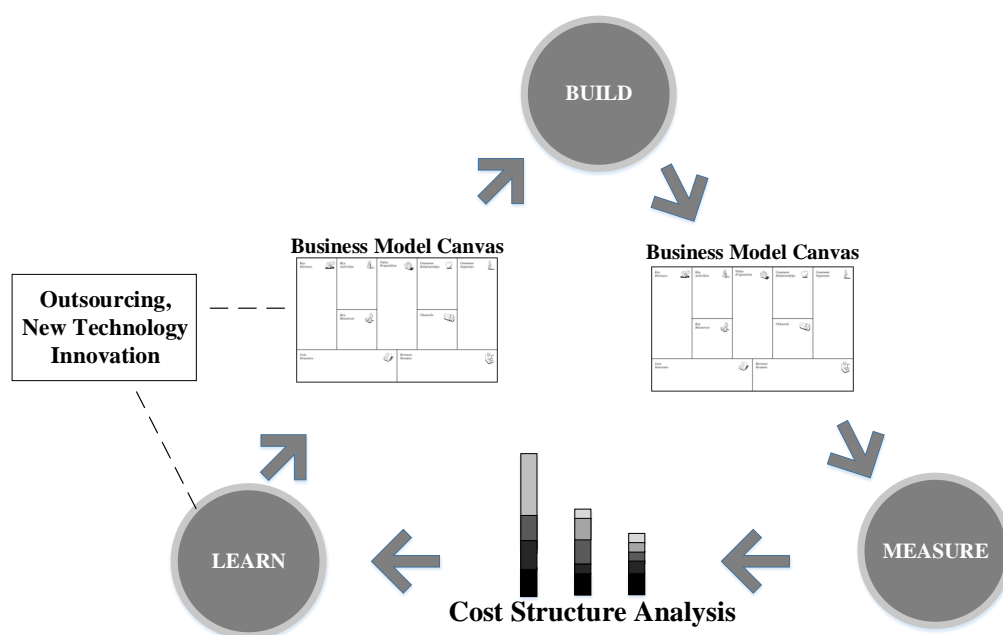
The second opportunity in this section refers to the changes in perception. It is a general truth that facts do not change however over time their meaning does. Perceptions change rapidly in the existing world. They might change because of a genuine need sparked by customer awareness or simply smarter businesses market their ideas in such a way so as to spark this perception change in the favor their products. (Ford et al., 2002) For instance IKEA and their emphasis on being a sustainable green business. IKEA used simplicity alongside an environmentally sustainable business model to position itself differently in the market. This required investment on its part in newer suppliers which could cater to



its sustainable needs however the product caused widespread change in perception in the industry leading to its innovation and success.

The final source of opportunity, and perhaps the most popular, is new knowledge. New knowledge is considered a breakthrough innovation as it immediately sets itself apart from everyone else. However Drucker (1985) argues that such an innovation is far and in between. The determination of such an innovation takes considerable amount of time with varying input from different fields of the industry. Even after its conception, its breakthrough rate might be slow as market adoption is not guaranteed. This naturally makes this sort of innovation very risky. By favoring more attractive markets which are the ones with bigger potential and lower risk, the chances of obtaining higher returns in a market are better (Agarwal & Ramaswami, 1992).

All in all the industry appreciates innovation and it offers multiple incentives in terms of profit and growth for those companies that chose to pursue it irrespective of the risk involved. It has been identified that there are multiple sources of innovation however as per the scope of the thesis, the emphasis is on using innovating to determine solutions for possible roadblocks that occur in the business model of a company. In other words, the need is initially determined and then a solution sought after. This specifically refers to process needs being the source of innovation in this case. Cost structure analysis identifies the cost issues within the business model of a company. This then arises a process need for a solution to be determined. Previously this solution came in the shape of outsourcing or use of new technology however now it can be inferred that innovation through process need is also a correct alternative. This iterates the framework from Figure 21 to Figure 29 below.



**Figure 29.** Framework for resolving roadblocks in startups.

As can be seen in the Figure, once the performance of the business model is measured using a cost structure analysis and roadblocks identified, the learning process then deems it necessary to iterate the model according to the lessons learnt to improve the existing set up. These roadblocks are then removed by using either outsourcing, new technology or innovation. This is then put in the business model canvas, built and tested again by the cost structure analysis to ensure that it works smoothly.

## 5. CASE STUDY: MOST INTERESTING FOOD

### 5.1. Team Nauti

Nauti's founding team consisted of two members both with a background in industrial management and a keen enthusiasm for food. This is precisely why they wanted to get into the food business. Having a background in engineering and business, the team decided that the best way forward would be to combine technology with food and propose a product which would change the method with which food is used as a source of profit in Finland.

Both team members are avid lovers of food. This love for food made them regular customers in local restaurants in the cities of Tampere and Helsinki in Finland. However both of them faced similar problems while eating in restaurants. Finland is quite an expensive country and its restaurants are no different. An average meal in a midrange restaurant in Helsinki costs 38 Euros (Numbeo, 2015). Similarly the cost of a meal in a midrange restaurant in major European city like Barcelona costs 18 Euros (Numbeo, 2015). The price difference is very steep. The team then made an educated assumption that the cost of going to the restaurant is a major deterrent to people going to restaurants.

Businesses, however, are never created based on assumptions and thus it was important to validate assumptions before moving forward. In order to validate whether prices are the main reason behind low customer activity in restaurants, the team went to the streets and conducted interviews of people walking by. There was a general consensus amongst the audience that while they all like going to restaurants, they cannot go on a regular basis simply because the prices are too steep. Thus they save the restaurant experience for special occasions which mandate going out. After validation, the team started combining their research to find a solution to this problem.

An important thing to take into consideration for any service that wants to combine technology to a service based industry, e.g. the restaurant and its customer, is that while what is valuable to the customer is important, it is also very important to consider that any solution offered needs to be in sync with the service provider also. Keeping this in mind, the team formulated that offering discounts on a daily basis on certain dishes on the menu would promote the restaurant and encourage more people to go to restaurants.

Nauti is a mobile application which its customers can download for free from the internet on to their phones. Nauti has a huge collection of restaurants that fall under its umbrella for which it offers deals every day. The idea is that each restaurant involved offers exclusive discounts for specific dishes on its menu to the customers of Nauti. Nauti then

designs beautiful discount vouchers which it publicizes through its mobile app and gives a chance for the user to redeem at the restaurant.

The incentive for the customer is to get meals at restaurants at cheaper prices. Similarly the incentive for restaurants is to get more customers. However it does not end there. These offers are only based on main course meals. Once the customer is inside, the staff of the restaurant can always push extras like appetizers, desserts, wine and generate more money for the business. Restaurants always make more profit from selling items which accompany a main meal rather than the meal itself. Nauti promotes this concept.

More so, the application serves as a database for restaurants to catalogue themselves. This offers a convenient medium for customers to discover, sort out and decide on restaurants. It is also an excellent marketing platform since the best deals are generally what the customers go for. Similarly, its GPS functionality makes it possible for customers to find excellent deals closest to them. This idea was presented to both restaurants and customers to decide whether pursuing it would be feasible. The response was very positive. The business model that the company then pursued is illustrated in the Figure 30 below.

The Business Model Canvas				
Designed for:		Designed by:		On: dd/mm/yyyy
		Nicholas Sharaf		Iteration #:
<b>Key Partners</b> <small>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</small> <b>FOOD</b> Local Restaurants  <b>IT</b> Switch ITC Pakistan  <b>Advisory Board</b> Switch ITC New Factory Gapps Oy Tamla Oy	<b>Key Activities</b> <small>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</small> E-Commerce Website + App  Sales & Marketing  <b>Key Resources</b> <small>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</small> High End IT support access Recipes Sales + Marketing Channels  <b>What we need</b> Funding Restaurants	<b>Value Propositions</b> <small>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</small> <b>For End Customer</b>  Cheaper Food Access to Restaurants Convenience  <b>For Restaurants</b>  Increase in Customers Opportunity to sell more Marketing	<b>Customer Relationships</b> <small>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</small> E-Commerce Portal  <b>Channels</b> <small>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</small> Web Portal + Mobile App  Social Media	<b>Customer Segments</b> <small>For whom are we creating value? Who are our most important customers?</small> Ages 20-45 Metropolitan Cities Middle to Upper Middle Class
<b>Cost Structure</b> <small>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</small> Web Enterprise + Customer Support Sales + Marketing campaigns		<b>Revenue Streams</b> <small>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?</small> Cut per Purchase Affiliate Marketing		

www.businessmodelgeneration.com

*Figure 30. Business model canvas for Nauti.*

Since the scope of the thesis being limited to cost structure analysis and innovation, this section will not discuss the features highlighted in the customer relationships and revenue streams sections. This is because these elements do not have a direct impact on cos

structures and for the sake of simplicity will be kept aside. The rest will be discussed in detail.

In terms of key partners, it is important to understand that cooking and delivery of food was never in the scope of what the business wanted to achieve. What it wanted to be was a marketing/communication medium between the customer and restaurant. This naturally mandated that Nauti reach out and make partnerships with restaurants. Thus one of the most important partners that the business needed to have were restaurants. In order to get them, Nauti offered free marketing services and proposed a discount based meal plan which would help get more customers. For this, the partner restaurants agreed that they would give a percentage off the final price of each customer ticket coming through the app.

Another key relationship for the business was its developmental team. Nauti started with only three members with the idea that they would make use of cheap IT development options abroad. Thus Nauti entered an agreement with an overseas app developer to develop the whole app and use their expertise for any changes or troubleshooting that might be required. Since the app involved e-commerce and saved sensitive information such as credit card information, it was best perceived that specialists be used to carry out these tasks.

More so, the team consisted of three students still in university. Hence to learn more about the trade and add credibility to their portfolio, an advisory board was set up to help with technical, sales, marketing and funding processes. There were a total of four advisors each representing a successful firm in its own respective field. Switch ITC is a breakout value added service provider in Asia with extensive experience in mobile app development and digital marketing, facets of practical business that were going to be Nauti's core business. Similarly Gapps Oy is a google services provider in the Finnish market and possesses great experience in digital and affiliate marketing. Nauti also became part of New Factory class of 2015. New Factory is a Tampere based business incubator helping startups with the initial guidance and push required to get them started. With an expert board of mentors from different fields of business throughout Finland, New Factory offered the unique chance of giving Nauti direct exposure to customers, business networks and even restaurants in their aim to succeed.

In terms of key activities, the business description already highlighted that Nauti would focus on marketing and sales activities for the restaurant while developing a stable robust ecommerce web portal. For these, the key resources are the already identified high end IT development team, and through New Factory the sales and marketing channels which the business wants to exploit.

Perhaps the most significant part of the business model is Nauti's value proposition. These values are split into two specific categories i.e. End Customers and Restaurants. Naturally for the business to be successful, not only does it need to provide excellent value to its end customer but also to its key partners like the restaurants. For end customers, Nauti offers a three prong value proposition strategy aimed to provide the greatest value to its customer. These are:

- Cheaper food
- Restaurant visibility (Access to restaurants)
- Convenience

As discussed before, Nauti offers discounts on specific meals to customers. This naturally is viewed as access to cheaper food where prices for certain products are lower than what they would be in a menu e.g. a 15 Euro burger is available for 10 Euros with a voucher from Nauti. Buoyed by the success of Cityshoppari.fi and PINS, both groups that offer loyalty based discounts, Nauti felt that discounts is an effective way to get people interested. Similarly, Nauti included an effective GPS-based search engine which would geographically locate the best deals near its customers. This meant that if a customer was near a specific business, its items will appear first. This is fair marketing for all its restaurant partners involved and also increases visibility of restaurants which might not have the budget to market themselves. It is also an extremely useful tool for customers since they can surf through options close to them rather than get promotions for deals that might be quite far away. Finally, cheaper deals and greater access to restaurants is coupled with a free to download and use mobile application with a trendy easy to use interface. This adds to the convenience of the customer and makes the final blocks of the value being proposed.

Similarly Nauti proposes a three prong value proposition strategy for its partner restaurants. These are:

- Increase in customers
- Opportunity to sell more
- Extensive marketing

These are elements which have been discussed previously. To sum it up, Nauti's discount based model aims to encourage customers to go to restaurants. Once more customers start going to the restaurants, the in house service staff can then push items such as appetizers, desserts and wine on to the customers. This is a significant value as not only does the service promise more customers but also gives the restaurant the opportunity to sell more products. Similarly, the best way for selling the app for Nauti is to advertise the restaurants and quality deals that it has. This gives the opportunity for restaurants to receive extensive marketing for free.

The channels to be used for marketing the product and delivering it to the customers is the web mobile interface. Nauti planned to use Applestore of Iphone users and Playstore for Android users to make its app available to the end customer. Similarly it would rely heavily on social media e.g. Facebook, Instagram, Twitter and Pinterest, to market itself heavily in the Finnish market. Furthermore, each partner restaurant would carry brochures and posters of the service inside its premises so its regular customers also become aware of the service.

Finally, it is important to analyze what the customer segments are for Nauti. These customer segments are the building blocks of the complete business model and only after their validation is the value proposition model, key partnerships, activities and other elements of the business model canvas are determined from. Nauti's customer segment is of people who are:

- Ages 20-45 years
- Living in metropolitan cities
- Belong to middle and upper middle class

During Nauti's research, they found that people most drawn to discounts belong to the age group between 20 to 45 years. Similarly the lower bracket of this group is very cost conscious and hence more driven to be persuaded by discounts. Similarly, restaurant business are more active in metropolitan cities thus making them a more efficient target for Nauti. Since metropolitan cities offer fierce competition between restaurants, opportunities for them to effectively market themselves gives the added bonus for them to jump on board. Finally the business aims to target middle and upper middle class of people due to financial constraints of the lower class. The business proposes the public to be active customers in the restaurant business. This requires significant spending power of the customer and thus limits the lower class from effectively participating. Similarly the upper class has exclusive high end restaurants which cater to their needs. Fine dining restaurants do not indulge in extensive marketing through discounts and thus cannot be persuaded to initially join Nauti.

This forms the basis of the business model which Nauti aimed to proceed with in the market. On further analysis, it faced many roadblocks which through cost structure analysis identified serious constraints to its solution. This eventually led to its pivot to Most Interesting Food. This journey is discussed in the next chapter however an insight into its business model is explained in the next subchapter.

## 5.2. Most Interesting Food – Initial

After three months of investing time and effort in Nauti, the team realized that the idea is simply not going to work. The reasons why this realization came about are explained in this section. However, what is relevant to know is that the team wanted to stay close to the food industry and thus their first major pivot did not change the major industry that they wanted to be a part of. The first major pivot came in the form of a new company called Most Interesting Food.

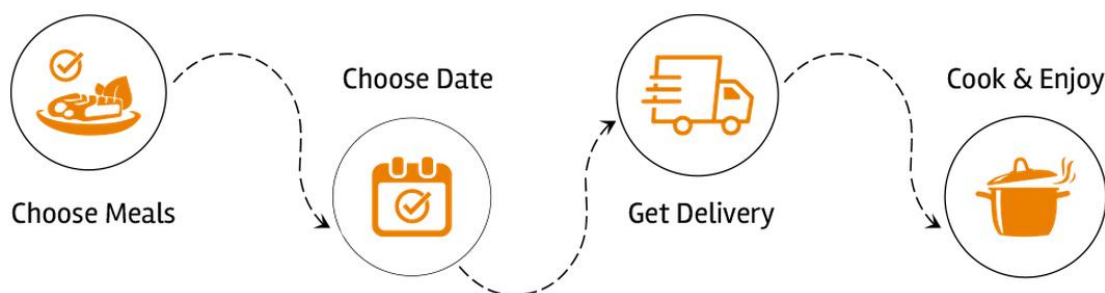
Most Interesting Food is a dinner kit delivery service offering its customers delicious weekly recipes centered on fantastic themes that also change every week. For those recipes, the company offers all the ingredients delivered straight to the customer's home in exactly the right amounts. It is a web based service which the customers can use through the internet. This is shown in Figure 31 below.



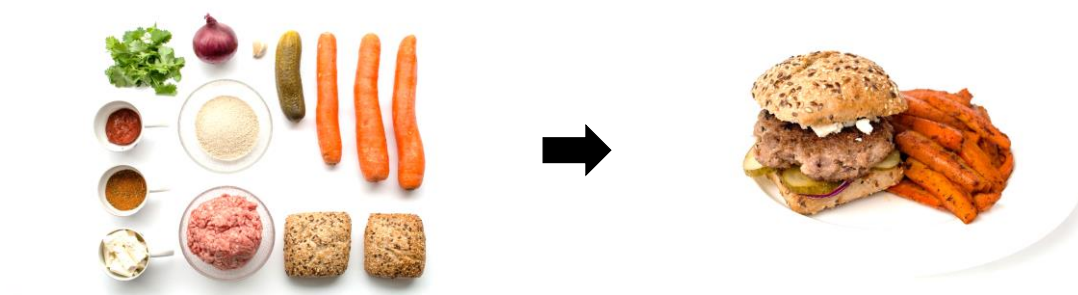
*Figure 31. Most Interesting Food web service.*

In essence, it is a meal planning service promising to bring international high quality gourmet meals to their customer's homes for them to cook. It eliminates two basic excuses due to which people do not cook. These include a distaste for going to grocery stores and secondly not having the time and know-how to actually cook food. The process with which the service can be used by the customer is shown in Figure 32 and 33 below.









**Figure 32.** *How Most Interesting Food works.*



**Figure 33.** *How the product works.*

As can be seen, Most Interesting Food works as a delivery service. It offers customers weekly menus and delivers the raw ingredients for these meals. Figure 33 illustrates how customers receive all the ingredients in exactly the right amounts. These ingredients can then be used to cook delicious recipes in approximately thirty minutes. The product is convenience driven since the recipes are fast and easy to cook, the ingredients are premium and the recipes designed are delicious. This eliminates the need for customers to plan their meals and schedule grocery shopping trips. More so MIF procures its ingredients directly from farmers making the service more sustainable and its products fresh.

In terms of competition, the service is not a sole innovation. It faces big competition from international companies making headways in the US and German markets. This comparison is illustrated in Figure 34 below. The key point to understand before analyzing competition is that major competitors were all conceived in 2013. This makes the industry relatively new and not mature. Thus while differentiation of the service is important, the industry is not yet mature enough for the businesses to bank significantly in differentiation since the concept in the market is still not fully understood by the consumer.

Competition/Global					
	Individual Portions	Cooking Instructions	Gourmet Food	Specialty Ingredient	Weekly Themes
	✓	✓	✓	✓	✓
	✓	✓	✓	✓	
	✓	✓	✓		
	✓	✓			

**Figure 34.** Competitor Analysis of MIF.

MIF's core focus on adding variety to their offering by developing new weekly recipes and theme based products sets it apart from its global competitors. It is also where the name of the company is derived from since not only the food served is delicious and comprising of specialty ingredients, the service also focus on weekly core themes that it wants to address. Essentially it is a service that offers excellent cooking with a story to tell.

In order to make this process work, the company naturally required a business model. Business models are essential for the working of the company since they define the objectives and key characteristics of how the company operates. They are a tool to ensure what values and processes does the business want to pursue and how they want to pursue them. Its business model is illustrated in the business model canvas Figure 35 below.

The Business Model Canvas				
Designed for:		Designed by:		On: dd/mm/yyyy
		Nicholas Sharaf		Iteration #:
<b>Key Partners</b> <small>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</small> <b>FOOD</b> Local Market Halls Organic Shops  <b>IT</b> Switch ITC Pakistan  <b>Strategic Partnerships</b> Ravintolapäivä City of Helsinki Govt.  <b>Cooking Expertise</b> Head Chef Ravintola Grotesk  <b>Advisory Board</b> Switch ITC New Factory Gapps Oy Tamla Oy	<b>Key Activities</b> <small>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</small> E-Commerce Website + App  Logistics (Delivery Service)  Food portioning + Packaging  Recipes  <b>Key Resources</b> <small>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</small> High End IT support access Recipes Sales + Marketing Channels  <b>What we need</b> Funding Food Vehicle Storage Facility	<b>Value Propositions</b> <small>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</small> Efficient Fresh & Healthy Food Technical Recipes Convenient Exciting cooking techniques Access to Ingredients Reduction in Waste Sustainability Local	<b>Customer Relationships</b> <small>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</small> E-Commerce Portal Personal Delivery Community Model Key Participation in Community Events  <b>Channels</b> <small>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</small> Web Portal + Mobile App  Community Selling through strategic partners i.e. Ravintolapäivä  Social Media Home Delivery	<b>Customer Segments</b> <small>For whom are we creating value? Who are our most important customers?</small> <b>Initial Test Group</b> Ages 24-50 Singles/Couples without Children Food Literate Geographically around Kallio  <b>Future Segment</b> Employed 24-70 Metropolitan Cities  <b>International Targets</b> St. Petersburg Gdansk, Warsaw, Krakow Barcelona/Madrid
<b>Cost Structure</b> <small>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</small> Logistics (Delivery and Storage) Ingredients + Stock Web Enterprise + Customer Support Sales + Marketing campaigns		<b>Revenue Streams</b> <small>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?</small> Monthly Subscription Service Market Place for Kitchen Essentials Intelligent Data for relevant Industries		

www.businessmodelgeneration.com

*Figure 35. Business model canvas for Most Interesting Food.*

While going through the business model canvas for Most Interesting Food, it is important to analyze the elements which evolved from Nauti's business model rather than describing the whole model itself. Some elements of the business model remain similar to that of Nauti. This is key trait of a business pivot. While the look and operations of the company might completely change during a pivot, this does not necessitate that the relationships and partnerships made need to be forgotten. As can be seen from the Figure, Most Interesting Food maintains the same advisory board and IT development resource as before. Being a food delivery service that offers raw ingredients for the customer to cook, naturally new partnerships needed to be made. Most Interesting Food reached out to local farms, market halls and organic shops to procure the best and freshest of ingredients for its customers. Another important relationship which it pursued was restaurants since it wanted to get a well-respected chef on board to design the weekly menus. For this many different contacts were made and positive response was received from Ravintola Grotesk. One of these restaurant chefs would then go on to take the role of head chef within the company to design weekly recipes. Similarly, the team identified that for such a product, where little credibility of the team exists, to succeed, it needs to the backing of individuals and organizations that are well respected within the Helsinki region. For that contacts were made for the City of Helsinki government which has a specific office assigned for food promotion. Furthermore the team contacted the pioneers who created the restaurant day (ravintolapäivä) in Finland. This offered major credible to

Most Interesting Food in the industry as major food frequenters and early adapters to the product religiously follow this group.

In terms of key activities, the business retains its previous activities of developing and managing an ecommerce website and app. However, being a food delivery service, a significant key activity for the business is logistics. The logistics is a double ended sword since it deals with both customer delivery and the packaging and procurement processes that take place before a package can be delivered. The business procures fresh ingredients and spices from its suppliers, which are then portioned by the in house team and packaged. These packages are then delivered to the end customer. This is the complete logistics process and a major activity for the business. Another key activity for the business is recipe design. For this the business has their in house chef however it is important to note that each recipe designed has to strictly fit a budget already allocated. Hence this also is a key activity for the business.

For key resources, the business retains the resources it had gathered previously. However due to the type of product that is being offered and the logistics challenges, the business had to invest in finding means of transport and thus purchased vehicles for delivery. Also to carry out the portioning and packaging processes, a storage facility equipped with an industrial kitchen had to be purchased. These were the key additions to resources while managing the pivot.

The company's value proposition model was completely altered during the pivot. This can be expected since the business went from a mobile app discount service to a robust dinner kit delivery service. The only retention here was that of customer convenience however it can be argued that every product aimed at B2C markets has to have a layer of convenience on it. That is specifically why common grocery stores are also sometimes referred to as convenience stores. The business proposes fresh and healthy recipes with menus that change weekly to be delivered directly to customer's homes. The package include ingredients in exactly the right amounts required in the recipe alongside step by step cooking instructions to make sure that the experience is simple and rewarding. This offers its customers the chance to receive fresh ingredients, a wide variety of food, access to ingredients they would not have before, a chance to learn new cooking techniques and also significantly reduce their daily food waste by only receiving items that they require in specific quantities and make it a sustainable product. The added advantage that this is delivered to their homes alongside cooking instructions makes the experience convenient also.

In terms of channels, the business retains its philosophy to use local connections such as Helsinki City Government to promote its product in specific communities. In terms of its in house packaging function, it banks heavily on a zonal growth system using food enthusiasts centered around the food culture promotion office in Helsinki as its initial

customer base. The products are sold through them using an ecommerce website + mobile app. Similarly, like before, extensive social media campaigns are launched in order to market and sell products to the general public. The service also maintains a feedback channel through the website with its customers.

Most Interesting Food has a very well defined customer segment as it is in the B2C domain and is the result of extensive research. It targets people between the ages 24-50 since it was validated that this age group has the highest tendency to purchase such products and experiment with their food. They also limit their product to singles or couples without kids as their product is not very appealing to little children. As an initial target group, it is also identified that people who are food literate i.e. like to cook new things and follow food as a hobby are more drawn to this product. In order to further segment the product in its initial launch, the company also geographically sets a specific region as an area to target. This is primarily done on the basis of highest customer response to the product in a specific area and practical necessities such as logistics. Growing zonally offers the company a chance to control organic growth.

### **5.3. Most Interesting Food – Present Day**

The core crux of the idea for Most Interesting Food has not changed. But due to market considerations and also technological/resource limitations, the company made minor pivots and alterations to their business model. The reasons why are discussed in the next section. However what is important to identify is the changes that have been made to the model and what exactly are they.

The iterated business model canvas is present in the Figure 36 below. By comparing the two business model canvases, it is easy to note that no major changes have been made to the value proposition or the daily workings of the business. However what is interesting to note is that practically all key partnerships from the food section have changed. A change in partnerships always signifies that the company has altered either the cost structure or branding of the product while it might not show up in other sections of the business model canvas.

The Business Model Canvas				
Designed for:		Designed by:		On: dd/mm/yyyy
		Nicholas Sharaf		Iteration #
<b>Key Partners</b> <small>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</small>  <b>FOOD</b> Local Farms Professional Meat Suppliers Wholesalers  <b>IT</b> Switch ITC Pakistan  <b>Strategic Partnerships</b> Ravintolapäivä City of Helsinki Govt.  <b>Cooking Expertise</b> Head Chef Ravintola Grotesk  <b>Advisory Board</b> Switch ITC New Factory Gapps Oy Tamla Oy	<b>Key Activities</b> <small>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</small>  E-Commerce Website + App  Logistics (Delivery Service)  Food portioning + Packaging  Recipes  <b>Key Resources</b> <small>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</small>  High End IT support access Recipes Sales + Marketing Channels  <b>What we need</b> Funding Storage Facility	<b>Value Propositions</b> <small>What need do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</small>  Fresh & Healthy Food Local ingredients Variety Convenient Exciting cooking techniques Access to Ingredients Reduction in Waste Sustainability Local	<b>Customer Relationships</b> <small>What type of relationship do our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</small>  E-Commerce Portal Personal Delivery Key Participation in Community Events  <b>Channels</b> <small>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</small>  Web Portal + Mobile App  Social Media  Home + Office Delivery  Pop Up shops	<b>Customer Segments</b> <small>For whom are we creating value? Who are our most important customers?</small>  <b>Initial Test Group</b> Ages 24-50 Singles/Couples Families All around Helsinki  <b>Future Segment</b> Women Employed 24-70 Metropolitan Cities  <b>International Targets</b> St. Petersburg Gdansk, Warsaw, Krakow Barcelona/Madrid
<b>Cost Structure</b> <small>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</small>  Logistics (Delivery and Storage) Ingredients + Stock Web Enterprise + Customer Support Sales + Marketing campaigns		<b>Revenue Streams</b> <small>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?</small>  Monthly Subscription Service Market Place for Kitchen Essentials Intelligent Data for relevant Industries		

www.businessmodelgeneration.com

*Figure 36. Business model canvas for Most Interesting Food – Present.*

As per the business model canvas, the food section of key partnerships now focus on local farms, professional meat suppliers and wholesalers. The alteration here directly signifies that the business has changed the method of it procuring its raw ingredients. Previously the business was relying on local market halls and organic shops to buy its ingredients from. Naturally this is an expensive exercises and made the ingredients of the product a significant cost in the cost structure of the complete product. In other words, the business felt that it was spending too much on procuring ingredients and wanted to look at alternatives. This is interesting. Currently the supply network for food is focused on delivering food products to the grocery stores. This focus results in less fresh products and worryingly high waste. An industry statistic is that for raw vegetables, the supply network and delivery practices to grocery stores results in an extremely high waste percentage of 47%. In other words, for every tomato bought in a supermarket, one goes to waste. This is startling and with product awareness at an all time high, such statistics matter to the consumer. Most Interesting Food is focused on changing global supply logistics which focus on grocery stores being end customers and rather put the focus on the end consumer. Their method of doing this is to go directly to the farmers and procure meat, vegetable and other ingredients directly from them. This method reduces waste in the supply network, is sustainable and also deliver fresher ingredients to the customer than the supermarket alternative.

Another major change from the previous business model is its customer channels as the service now delivers its products not only to customer homes but also to offices. This

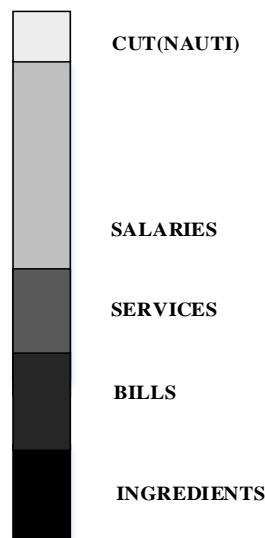
again is an innovation in the industry and a game changer. Office deliveries results in bulk orders from the same addresses and give the logistics suppliers for end customer delivery a bigger time period to deliver the product in. Larger orders for one location and larger flexibility in delivery timings clearly is cost saving innovation for the business. Logistics companies use trucks to transfer products from one place to another. Usually for each delivery, a time period is decided between them and the customer to ensure that when the order is delivered, the customer is present to receive it. In the food business this is a major complication since fresh food is no longer fresh if it sits in refrigeration for too long. Add to this the complication of geographical locations where different customers might be located at the far ends of the same the city. The usualy solution then is that if both customers want the product at the same time, then the logistics company dispatches two trucks instead of one to deliver the orders. This naturally costs money and in this case it would cost Most Interesting Food excessive amounts of money. The office delivery option solves that problem. The company focuses on going to offices and marketing their products. Then the bulk orders would have the same address marked as delivery. As a result the same delivery truck can carry bulk orders to that specific address significantly reducing product costs.

Another aspect of channels that is new to the business model is the use of pop ups. This is primarily a marketing move as pop ups around the city offers Most Interesting Food the chance to market itself directly to the customer and offer them a chance to experience what the service offers before having to order it. This naturally makes the service more relatable and real to the customers and thus more likely to adopt the product.

## 6. ITERATING INNOVATION IN MOST INTERESTING FOOD

### 6.1. Nauti to Most Interesting Food

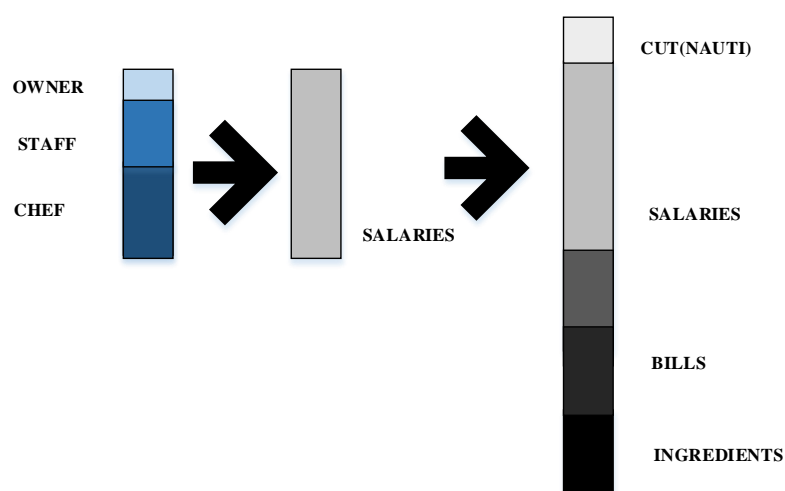
Nauti's transition to Most Interesting Food has already been highlighted by sketching their respective business model canvases. It should also be noted that this transition was a major pivot pursued by the team. This section studies the cost structures before and after the pivot and identifies the logic and reasoning behind the management making this decision to pivot. In order to analyze this transition, it is important to first understand the cost structure for Nauti. Figure 37 below illustrates the particular cost structure.



*Figure 37. Cost structure for Nauti.*

For simplicity, the cost structure is limited to cut, salaries, services, bills and ingredients. It is important to understand that Nauti primarily functions as a restaurant in its cost structure as it sells restaurant dishes to customers who physically visit restaurants. This means that restaurant cost structures considered in pricing the menus are what Nauti needs to consider while making its own cost estimates to determine product price. Thus the cost structure represented in the Figure represents the cost structure of a generic restaurant. It does not include the costs Nauti would incur in the development of technology, salaries of personnel, rent of facilities and marketing amongst others. It only includes the cut which the restaurant would Nauti for its services. Salaries in this particular case include salaries of the service staff, salary for the owner and most significantly salary for the chef. This is illustrated in the Figure 38 below.





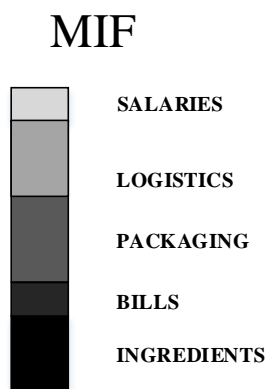
**Figure 38.** *Cost breakdown for salaries.*

As can be seen by the previous cost structure, salaries is a major cost per dish at a restaurant. While offering discounts on certain menus, it is in the interest of Nauti to not make cuts to the salaries section of the costs as it would discourage employees. Thus the remaining elements from the cost structure are what theoretically can be tinkered with. Unfortunately costs like bills and services incur in a fixed manner and cannot be changed without drastically changing the everyday processes of the restaurant. The only alternative left is then ingredients. Restaurants are unwilling to change ingredients or offer cheaper ingredients to customers as it seriously effects their value proposition. Specifically in Nauti's target section where the restaurants cater to middle to upper middle class customers. Hence unfortunately the only plausible solution is to make interim changes to the salary structure in order to offer significant discounts to customers.

Figure shows that the major cost within the salaries section is the salary paid to the chefs. Chefs form a very specific segment of professionals and reach the level to head a kitchen at a restaurant after years of training. This means that chefs are not in abundance in the market and thus are hard to get commodities that have lots of demands. One of these demands is high salary as it is usually the reputation of the chef that sells a restaurant rather than the owner. Nauti met with various owners and discussed reducing the percentage per plate cost that went to the chef salaries but unfortunately it was difficult to get a breakthrough.

After determining that salary of the chef could not be touched, staff and owner salaries were then evaluated and a proposal was made to try and offset the decrease in salaries on these menus by increasing their percentage on frill services like wine and desserts. This proposal was also rejected. At this point it was becoming increasingly clear that making cost reductions in salaries was more or less impossible and would not make a scalable

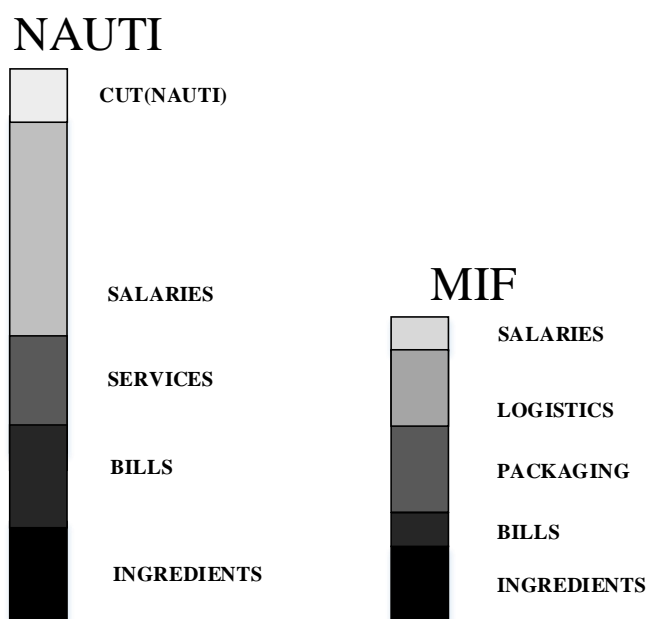
business model to pursue. The only plausible way forward was to remove the salary costs from the cost structure as much as possible. This was not possible without making a significant pivot. This led to Most Interesting Food. The cost structure of the company is represented in the Figure 39 below.



**Figure 39.** *Cost structure for Most Interesting Food.*

As can be seen from the cost structure, the service Most Interesting Food radically decreases the salary section of the costs for the cost structure. This was made possible by removing the major cause of cost incurrence in the offering i.e. plate of food. The major cost contribution in the previous cost structure for Nauti was that of ‘Chef’s salary’. MIF’s major innovation in this regard was to find an alternative to the value being provided by the chef. This essentially meant that the aim was to now find someone cheaper to do the cooking to produce a delicious plate of food. MIF’s solution in this regard was to shift the cooking process to the customer homes. This meant that restaurant quality dishes with restaurant quality ingredients could be sold at significantly cheaper rates by making the customers cook the recipes themselves.

As can be noticed, the ingredients, bills and salaries still contribute to the cost structure. While the bills and ingredients costs remain somewhat the same, the salary costs, as identified earlier, have significantly reduced. While the chef salary has been completely eliminated, the company still incurs cost for staff and owner salaries. Naturally the restaurant business does not work by selling customers raw ingredients and providing them equipment to cook thus the alternative was to deliver all the ingredients to the customers. This incurs its own costs. These costs are represent in the cost structure by packaging and logistics costs. Basically all the ingredients need to be bought, portioned into the exact amounts required and then sustainably packaged for them to remain fresh. These boxes are then packed, sorted and delivered to individual home addresses of customers. The costs for both packaging and logistics contribute majorly to the final cost of the product. However as can be seen in the Figure 40 below, in comparison with Nauti’s cost structure, the structure for MIF is a lot more cost efficient.



*Figure 40. Cost comparison between Nauti and MIF.*

Nauti's failure was due to high salary costs which could not be offset. The only way forward then was to somehow offset these costs and reduce the price of the final product in order to convert it into a scalable every day solution. This was the major motivation behind the pivot and the inception of Most Interesting Food. As can be clearly noted by the comparison between the two in Figure 40, the cost difference between the two services is immense.

## 6.2. Iterating Most Interesting Food

While the price of the product decreased significantly after the pivot from Nauti to Most Interesting Food, the costs were still significantly high. The consequence of high costs incurred is usually a low profit margin. Since the business in question is a capital intensive business which requires a lot of initial investment, it was concluded that the costs for MIF were still too high. If the cost structure of MIF is inspected from Figure 39, it is noted that there are three major cost contributors to it. These are:

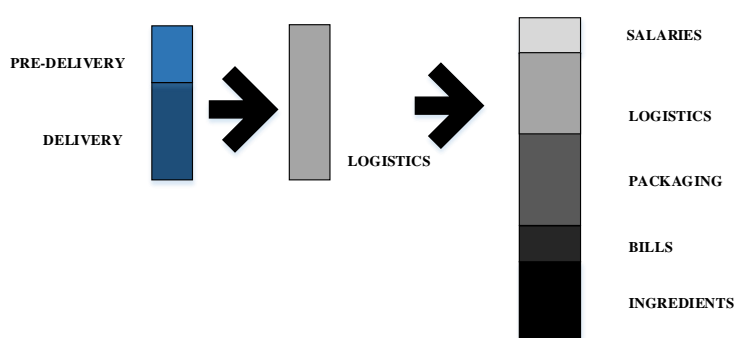
- Ingredients
- Packaging
- Delivery

Upon further inspection, it was noted that it was a significant value proposition to the customer to offer unique special ingredients. This meant that the quality and type of ingredient could not be altered. Using special ethnic ingredients and procuring local ingredients directly from farms results in significant costs but cannot be tinkered with to

a significant extent because of the business model of the service. If the ingredient costs are to be reduced, then it has to be through innovation of the procuring mechanism currently employed or through partnership negotiations where the supplier drops down their prices. This currently is unlikely and was thus dismissed till a later date when the market for it is more feasible.

The other two alternatives were packaging and logistics. While the business is still in its incubation Phase and lacks significant funding, it also lacks a significant customer base and thus it is unlikely that it can achieve efficiency in packaging. Efficiency in packaging refers to portioning products in bulk and streamlining processes so that each ingredient is portioned in advance in bulk and then sorted to make an efficient packaging process. Efficiency in packaging primarily depends on economies of scale i.e. the greater the numbers, the lesser the cost per unit. While in house packaging efficiency is difficult to obtain for a startup, it is always possible to outsource these processes to an external specialist. However in the case of MIF, this is not possible since all ingredients come from different farms and thus a wholesaler would need to sit in between to carry out these processes. Raising the interest of a wholesaler requires the proof of solid numbers showing extensive growth in a significant market base. That is something that a start up in an incubation Phase finds it extremely difficult to achieve.

The only alternative now left to focus on is logistics costs. The logistics costs of the company are high since they have to pay for delivery of raw ingredients to their packaging center and then they also have to pay for delivery of the finished product to the end consumer. This is illustrated in Figure 41 below.

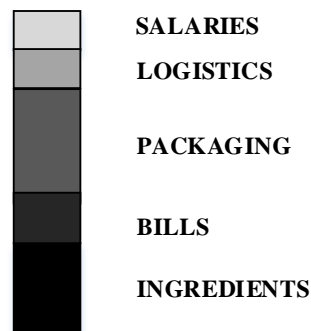


**Figure 41.** Cost breakdown for logistics.

As has been explained earlier, currently the company was delivering to the homes of its customers. This meant that each order was delivered to a different address and usually these addresses belonged to different geographical zones in the city. This had a significant impact on the costs. Similarly, in order to keep the product as fresh as possible, different ingredients from different farms were procured at the same time. This meant multiple trips to different farms to collect ingredients. This also had a significant impact on the

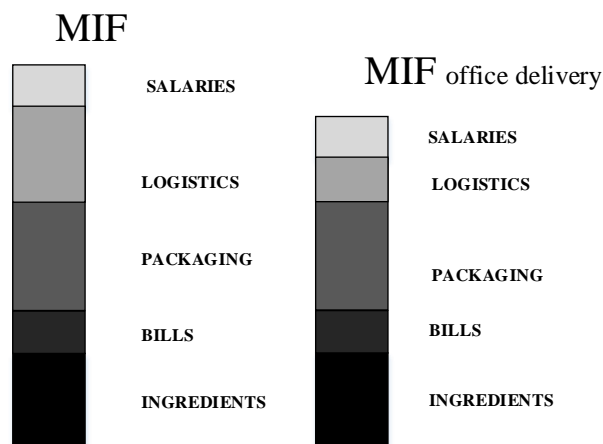
costs. However as can be seen from the diagram, further analysis of the cost structures led to the conclusion that the major cost contributor to logistics was delivery costs to the end consumer. After this particular conclusion, MIF altered its delivery channels and iterated its business model to start focusing on selling to consumers that want the product delivered to their offices. This resulted in the following cost structure represented in Figure 42.

### MIF office delivery



*Figure 42. Cost structure for MIF office delivery.*

As can be seen, the innovation of delivering not only to homes but also to offices has a significant impact on the cost structure of the product decreasing the overall costs. The primary reason behind this is because an office can hold multiple consumers at the same time. This means that in one delivery the company can potentially cater to multiple customers at the same time thus decreasing delivery costs per unit. The difference in costs after this particular iteration is illustrated in Figure 43 below.



*Figure 43. Cost comparison between MIF and MIF office delivery.*

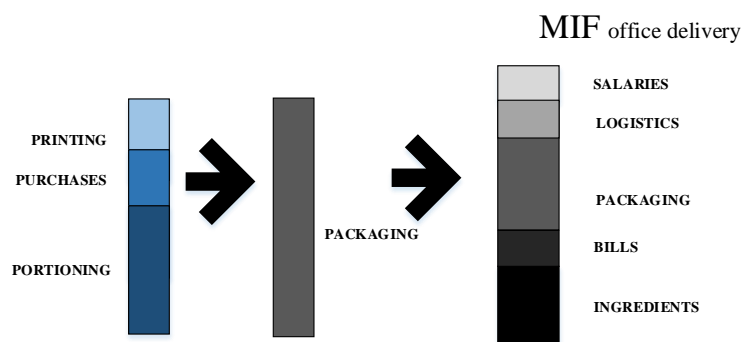
This type of innovation is used by companies such as Lindstrom in the carpet industry. It is however unheard of in the dinner kit delivery industry and its benefits are clear to see. By doing this iteration, MIF was able to maintain the price of the product that it had set while increasing its profit margins. This made the business more scalable and an attractive proposition for customers and potential investors who keep a keen eye on how lean the costs of the company are in terms of profitability.

### **6.3. Present day**

Part of the lean startup methodology is to keep the business as focused as possible to what the vision and objectives of the owners are. In other words, it is quintessential to keep the evolution of the business model an iterative process filtering out any processes which could be improved in a way to make the whole model more efficient. As has already been highlighted, the founders of Most Interesting Food never saw themselves as the founders of a logistics company or a manufacturing company. They also do not see themselves as a software development company. The main prerogative for the business was to provide a platform that combines externally sourced IT, raw materials, packaging and logistics into a complete product while taking control of the sales, marketing and business development functions of the enterprise. This is part of the lean startup philosophy which the founding team is implementing in their business.

While being as lean as possible is certainly desirable for startups, the reality is that lean methodology relies heavily on outsourcing processes to professionals in the industry. These professionals tend to offer better rates for companies which have a sizable customer base. Something startups in their incubation do not possess. For e.g. a company which generates a large number of orders for different locations gets a better rate from a logistics company than a company with limited orders. Thus in the start while it is desirable to cut out unwanted processes, market realities can make this desire an impossible scenario. This is precisely why in the previous section MIF focused on making their delivery processes more cost efficient and lean while keeping the packaging processes in house.

Either way, irrespective of whether the current market restrictions are feasible for the company, MIF still pursues market growth objectives which would elevate it into a place where these market restrictions are lifted. Thus it is essential to plan the way forward for the business. In order to understand what could be done in order to make the model more lean, it is important to understand the cost breakdown for packaging. By identifying what contributes to the costs of the packaging process, it becomes easier to isolate the meta processes that induce higher costs. With this knowledge, it becomes easier to propose solutions or alternatives. This cost breakdown is illustrated in the Figure 44 below.



**Figure 44.** Cost breakdown for packaging.

As can be clearly seen from the Figure, packaging has a significant cost on the total cost structure of the product. It is in fact the biggest cost incurring process within the business model. In terms of the ambitions of the company to strictly remain a sales and marketing firm driven by technology, it does not make sense for the business to keep the packaging processes as they are right now. In order to further understand the issue, it can be seen that the packaging costs themselves are split into three further categories. These are portioning, purchases and printing. Printing includes the costs which the business incurs for printing logos, stickers and recipe cards that go on and inside the box in which the product is delivered. These costs are negligible since these items are mostly generic and can be ordered once in bulk and used for multiple deliveries. These processes are also already external since the printing itself is done by industry specialists and the costs in question are the bill that the company pays to them.

In terms of purchases, it is important to understand that this section does not refer to the purchase of raw ingredients. That cost is already included in the ingredients section. This particular cost refers to the costs incurred when purchasing thermally insulated boxes in which the food is packaged alongside sustainable and biodegradable zip lock bags used to separate the ingredients in. This is a heavy cost bearing exercise since each zip lock bag needs to be filled and then a labelling sticker manually attached to it. Not only is it an excessive cost price wise but also takes a lot of time. It is an undesirable bottleneck within the company processes which requires excessive resources to solve.

Finally portioning is the largest cost block within the packaging process. The company in its value proposition promises to deliver fresh ingredients in the exactly the right amounts to its customers. This means that for instance if the menu is a beef steak with four potatoes each, for an order of four the product will include exactly sixteen potatoes. In terms of separable products like potatoes this process is not complicated however it is a different story for other products. For instance Chinese menus require extensive use of soy sauce. In the super markets soy sauce is only available in big bottles where as in the recipes itself

only teaspoons of the product is required. In this case, as per promise, the company will provide its customers soy sauce in only teaspoons of amounts and not the whole bottle. Sorting out these type of ingredients, portioning them and then packaging them in mini ziplock bags is an arduous cost incurring task which also takes significant amounts of time.

In order to make these processes more efficient, Most Interesting Food emphasized on getting closer to the farmer and as a result get ingredients proportioned and packaged from the source. This move naturally complicates the business network of the company since farms are often specialized and only produce certain products. This meant that a various variety of farms had to be brought on board. As a result of outsourcing the packaging process, the iterated cost structure of Most Interesting Food is illustrated in the Figure 45 below.

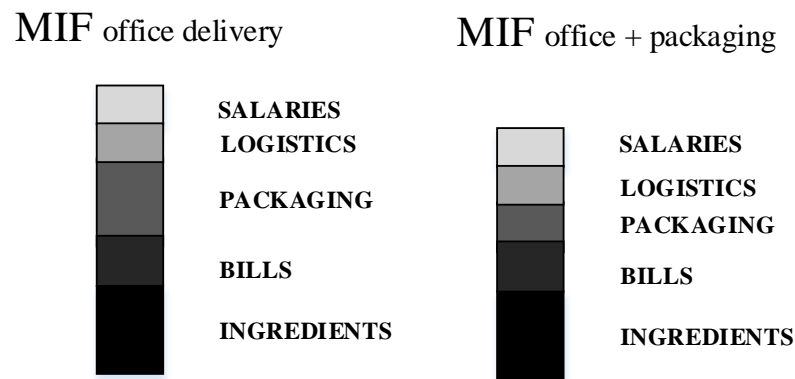
#### MIF office + packaging



**Figure 45.** Cost structure for MIF office + packaging.

As can be seen, outsourcing packaging processes has a significant impact on the cost structure reducing the overall costs of the process. What is interesting to note is that the packaging costs do not disappear altogether. This is because the company still needs to brand all the packaging itself and sort the ingredients coming from different locations together. However to further understand the impact of this outsourcing, it is important to compare the previous and the present cost structures together. A comparison would give insight into how much has the cost structure actually been affected. This is done in the Figure 46 below.





**Figure 46.** Cost structure comparison between MIF office delivery and MIF office+packaging

The Figure makes it abundantly clear that significant cost reductions have taken place through these iterations. The most important aspect of this whole exercise is to remember that the price of the product is fixed by the business. Fixing the price decreases flexibility of the company in terms keeping a steady profit margin when the costs increase. Thus MIFs way to tackle this issue is to decrease costs. Decreasing costs naturally results in a higher profit share since the price of the product does not change. These iterations have significantly reduced costs and thus had a very positive impact on the total profit margin for the company per product.

## 7. DISCUSSION

### 7.1. Overview of the Problem and Framework

Failure for startups is very common. It is an unsettling fact for bright-eyed entrepreneurs, but old news to startup veterans. (Nobel, 2011) People who are aware of the startup industry and culture are well aware that through failure most lessons are learned which can then be used to make their next startup a success. However this is easier said than done. Statistically failure in the startup industry is very common, so common in fact that it is rare to meet a startup owner who has not failed at least one of their ventures. (CBInsights, 2014)

Failure of a startup usually leads to the liquidation of all assets. In other words bankruptcy. If failure is defined as a scenario where the investors lose practically most if not all of their money that is being invested, then the failure rate for startups is 30 to 40 percent, according to Shikhar Ghosh, a senior lecturer at Harvard Business School and someone who has held top executive positions at some eight technology-based startups. (CBInsights, 2014)

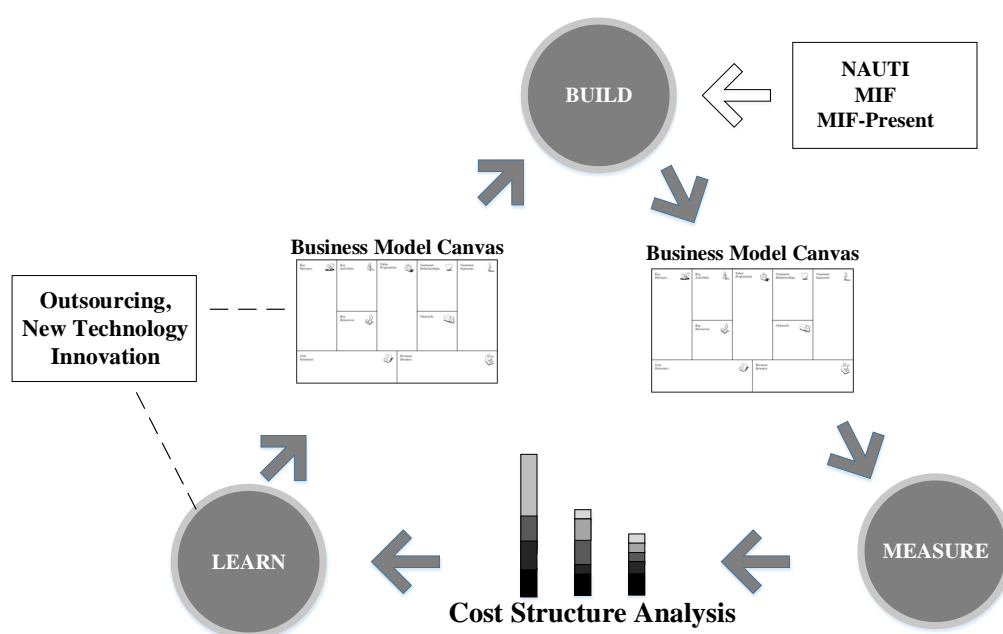
Alternatively failure can also be seen as not getting the projected return on investment that was previously set. In this scenario the failure rate is 70 to 80 percent. Finally failure is defined as declaring a projection and then falling short of meeting it, then the failure rate is a devastating 90 to 95 percent (Patel, 2015). It is very rare to see companies succeed when their definition of failure is this one (CBInsights, 2014)

This is a major problem in the startup industry. Many companies with excellent talent and brilliant ideas end up failing miserably. This can result in many innovations and excellent products never making it to the market. Currently no specific literature covers in detail the reason behind why 90 to 95 percent startups fail according to their own set goals. This thesis argues that the problem of failure lies in unrealistic expectations which startups set for themselves with a failure to understand what the market is, wants and would respond to. Thus the thesis emphasizes on validating the problem hypothesis and the solution hypothesis of the company even before the business model is built. In order to achieve this the thesis relies heavily on the Lean Startup Methodology and its iterative nature in developing business models.

Aside from the Build Measure Learn loop from the lean startup methodology, this thesis emphasizes on two specific theories to include into the LSM process in order to overcome these initial barriers that startups face in incubation. These are the in depth study of cost

structures and cost structure analysis and also the business model canvas. The framework developed is shown in Chapter 4.3 in Figure 29.

Using this model and embedding necessary tools such as the business model canvas and cost structure analysis, the thesis emphasizes on iterative solutions to roadblocks that can hamper a startup and its progression. More so it also identifies that the solution can be found in either outsourcing, new technology or through innovation. However solutions through innovation might lead to a technology disruption which as a result will open greater avenues for success.



**Figure 47.** *Iterating transitions of the case through the framework.*

Figure 47 identifies that the transitions of the case from Nauti to its present stage as Most Interesting Food will be determined using the framework developed. This iteration and analysis are discussed in detail in the section below.

## 7.2. Analysis of the Case through the Framework

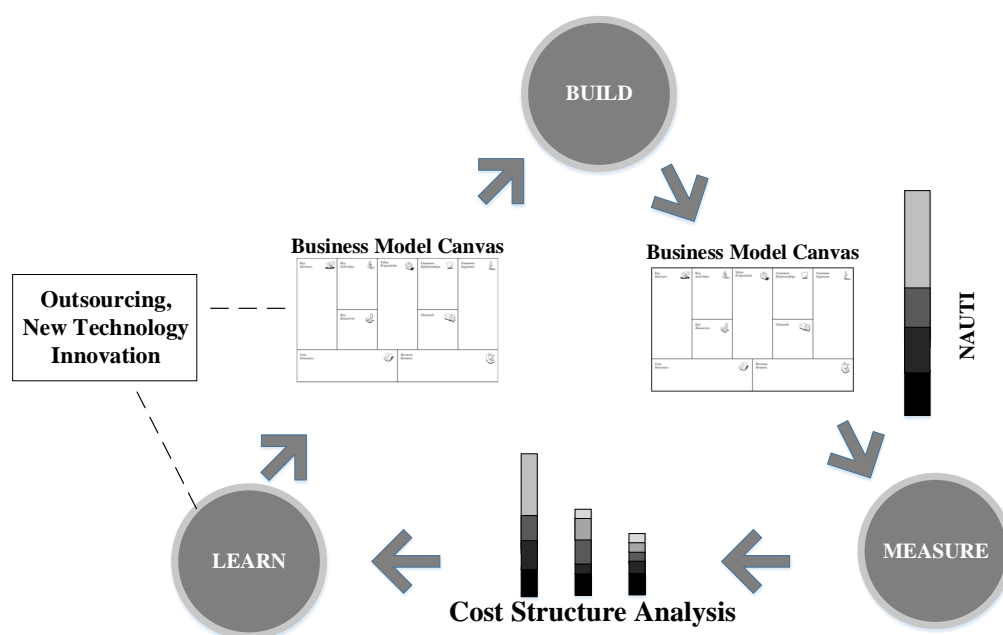
The case presented was the transition of Nauti to Most Interesting Food. This was very interesting since the two companies come from completely different industries and very different business models. It was interesting to see how one idea could lead to a direction which was completely different from what the entrepreneur initially set out to accomplish.

Nauti was initially envisioned to be a company that functioned like Groupon and Cuponation. This meant that the main ambition was to offer attractive discounts for dishes in restaurants and as a result peak customer interest. The model was based on securing customers to come inside a restaurant and then making major profit from selling them

additional frill services such as dessert, wine and appetizers. In this way the customer is happy by getting a cheap meal and the restaurant and Nauti are happy by making decent money from it. Its cost structure was explained in Chapter 6.1 with Figure 37.

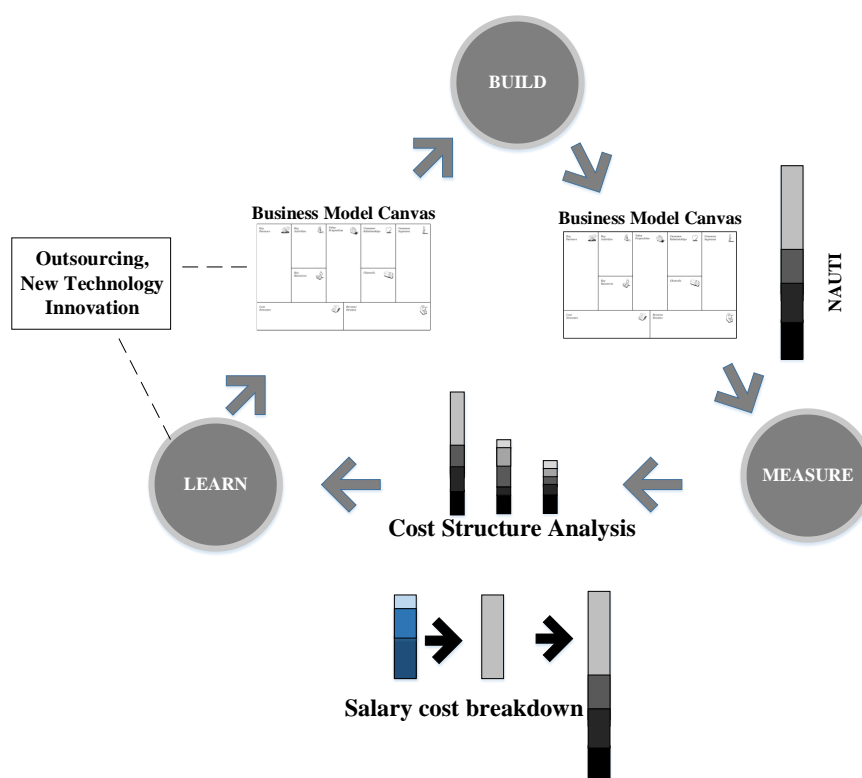
The major stumbling block for Nauti was the salary costs. In order to overcome salary costs, the company decided to alter their business model altogether and instead pursue a dinner kit delivery service where restaurant quality ingredients were delivered to the customers which they cooked themselves. This naturally removed the salary costs but in return added logistics and packaging costs to the cost structure. However even with the inclusion of new costs, the drop in salary costs was so significant that the new model was chosen. This new model led to a new startup by the name of Most Interesting Food. The cost structure of Most Interesting Food and its comparison with Nauti is shown in the Figure 43 from Chapter 6.2. When the comparison is studied, it is easy to see why the entrepreneurs determined that MIF offered a better solution. However by only looking at the cost structures, it is impossible to determine the actual reasoning behind this decision. As has already been identified earlier, entrepreneurs need to test their hypothesis in the market before giving them the go ahead.

While the cost savings are quite apparent, the fact that now customers are expected to cook at home is a big change in how the industry operates and thus a big risk for the team while making this pivot. Thus it is important to understand why exactly this decision was made. Referring back to the framework developed in Figure 29, Nauti represents the first stage of the business model and also the first stage of the framework where the model was built. Thus Nauti and its cost structure represent the process which took place between the Build and Learn arm of the framework. This is represented in the Figure 48 below. As can be seen, the startup first validated their hypothesis from the market and then developed a business model using the business model canvas and a cost structure for the company to show how revenue would be generated. Since the business was heavily dependent on restaurant costs, the cost structure shown in Figure 37 and 48 is that of restaurants. Using the framework, it is evident to see that clearly the development of the business model is taken care of through the business model canvas. This was done specifically to ensure that the startup itself and all its processes followed the lean startup methodology.



**Figure 48.** Step 1 in framework for Nauti.

Using the cost structure from restaurants was important because Nauti ran a business on discounts. The greater the discount the better the offer for the customer. Thus in its preliminary stage, the company wanted to test whether discounts could even be offered that were sizable enough to generate buzz in the public. Thus the first cost structure to be analyzed was the one in Figure 37. Moving from the step 1 to step 2 i.e. cost structure analysis, the cost structure was measured to ascertain whether the proposal was actually feasible or not. This takes place between the measure and learn arm of the framework. Its relevant place in the Measure Learn arm of the framework is depicted in Figure 49.



**Figure 49.** Step 2 in Framework for Nauti.

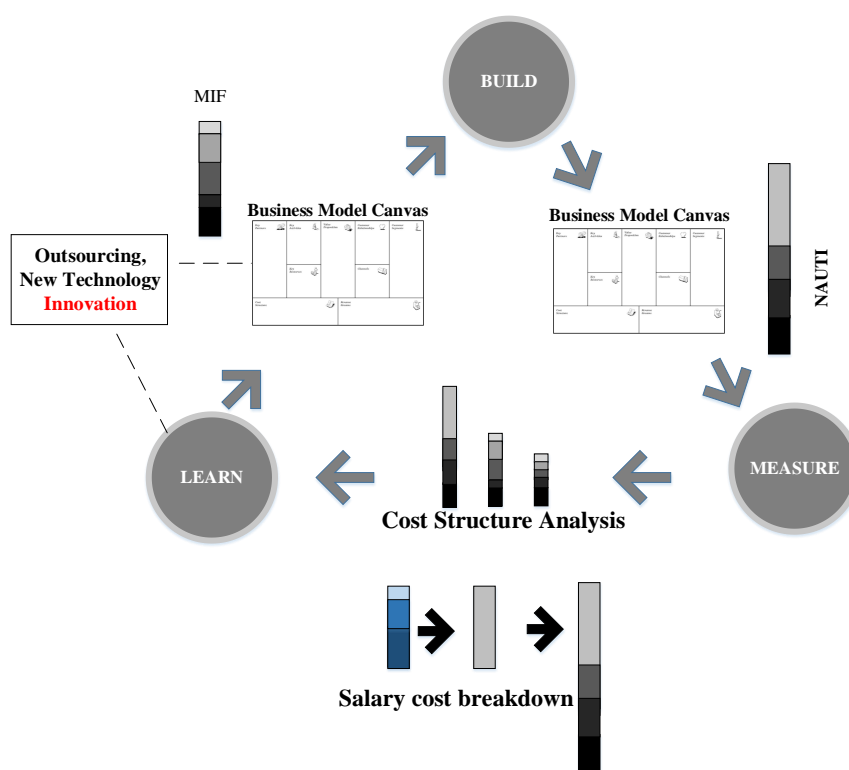
As can be seen, the cost structure analysis revealed that the salary section of the costs was the main roadblock to setting good discounts. This roadblock was caused by high chef, staff and owner salaries. The major brunt of any change to this cost would be faced by the chef. Upon analysis in the framework, the entrepreneurs realized that the Chef and his importance to a restaurant is far too significant to even try and consider making changes to their salary structure. Using interviews the team ascertained that the owners were unwilling to consider making changes to salary structures also. Since cost savings was the major proposition which Nauti wanted to sell to its customers, it understood that this model is not practical in an industry where the Chef and owners are both reluctant to make considerable changes to their salary systems. This was a roadblock which did not have an obvious solution.

The team understood that the only way forward was to remove this cost of salaries altogether as it would have a significant impact on the final price of the product for the customer. Salaries were bearing nearly 40% of the total costs and their removal would affect the prices significantly. The team had already identified and validated its problem and solution hypothesis. It had been quantified that cheaper prices would lead to a hike in customer activity however their business model was proving to be problematic.

Using this knowledge gained, the team set to find a solution to this particular roadblock. In the framework, the team was now at the Learn stage. Several options were considered

and the team tried to find a solution by using three common techniques as identified in the framework in Figure 29. These were that the solution either lies in outsourcing, new technology or innovation. Since the nature of the business, traditional outsourcing would not help and new technology was not an option. Nauti was going to have a partnership with multiple restaurants and thus it was unrealistic to expect all these restaurants to implement some new technology to reduce their cost structures significantly. Thus the only way forward was to pursue some form of innovation in order to proceed.

The team had clarity in their vision that they wanted to remain in the food industry and provide their customers with excellent food. This was where it was determined that if everything provided in a restaurant was provided to customers in a box and delivered to their home, it would make a convenient product and might be popular within the market. In order to keep costs low, the team decided to deliver only raw ingredients in their exact amounts with cooking instructions. This is show in Figure 50 below.

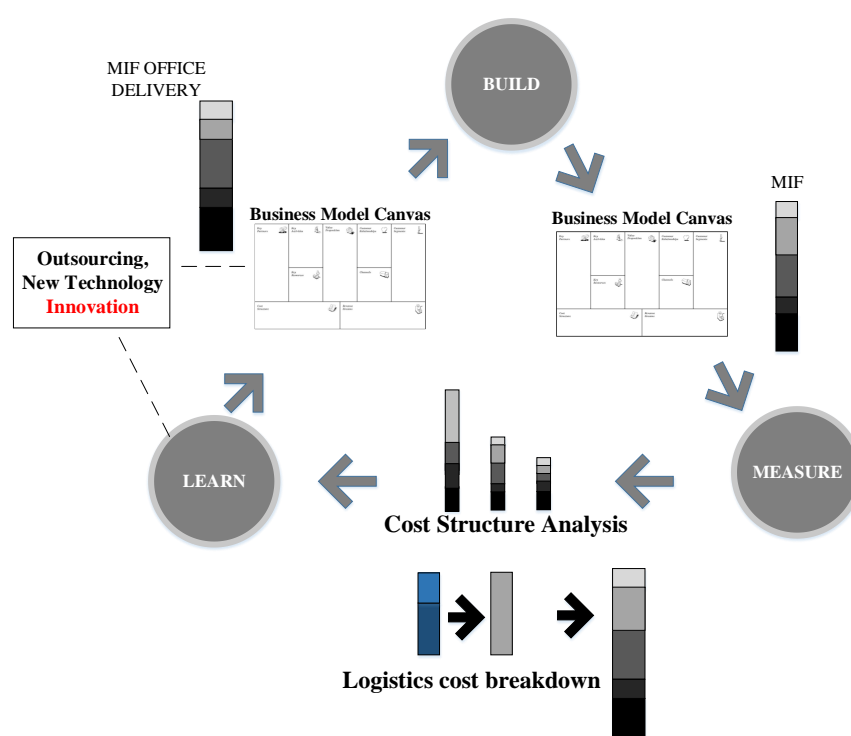


*Figure 50. Step 3 in framework for Nauti.*

This pivot led to the inception of Most Interesting Food, a dinner kit delivery service, which offers its customers fresh ingredients in exactly the right amounts. These ingredients are delivered to the homes of the customers. While not a drastic innovation, the service is an innovation in the Finnish market where such creative dinner kit delivery services do not exist. The responsibility of cooking being with the customer can also be seen as ‘outsourcing’ the cooking process to the end customer. This solution hypothesis

was again tested in the market and only after validation was the prototype for this model built.

The three steps identified above show the journey of the entrepreneurs from Nauti to what is now Most Interesting Food. It also highlights the iterative nature of startups and their business models. After all, during testing Nauti iterated from being a discount coupon service to a now dinner kit delivery service. However the iteration did not stop there. As the framework suggests, once MIF had been validated, it is important to continue with analyzing its business model to ensure that no other roadblocks are hampering its progress. During this analysis it was determined that MIF still had a few roadblocks which is why this thesis discussed two more iterations which were made to the business model. The first was the decision of the startup to start delivering not only to the homes of their customers but also to their offices. This whole iteration is illustrated in Figure 51 below.



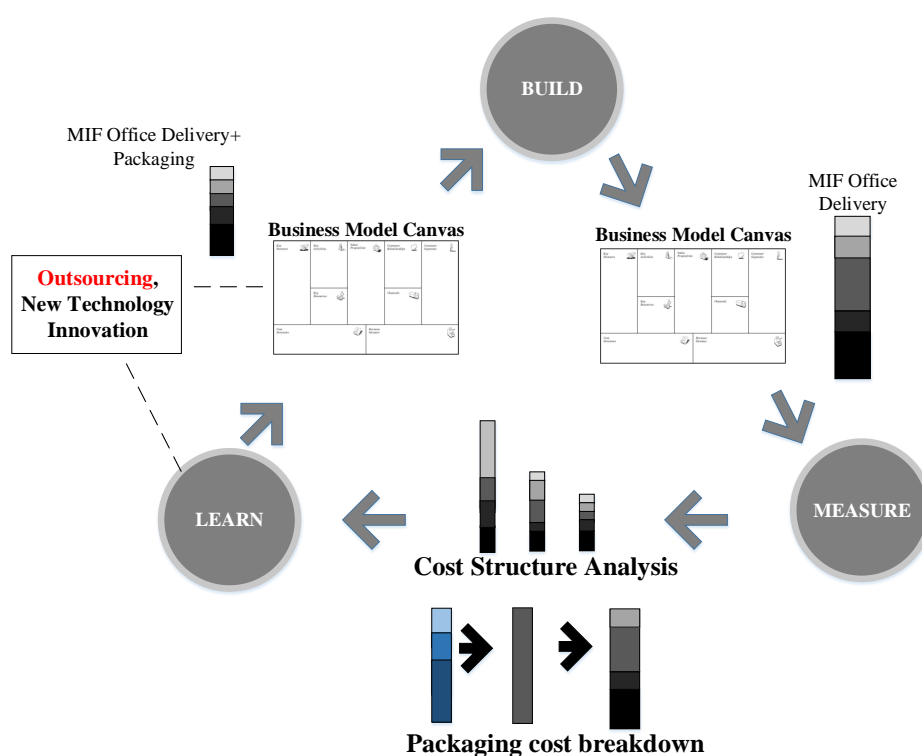
**Figure 51.** Iteration through framework to office delivery.

MIF was tested in the market and its validation by the customers went smoothly. However through cost structure analysis at step 2, it was learnt that the logistics costs were far too high for the company per delivery. This set them back in terms of profitability as the product demanded excessive unrealistic numbers of sale to be profitable. The company tested three alternatives in order to resolve this specific roadblock. Multiple logistics providers were contacted and their quotes evaluated. Then the company also made a research in using thermally insulated packages to deliver to customers so that they do not need to be home when the package arrives. This naturally gave more flexibility to the



logistics provider and thus decreased costs. The third was an innovation in the industry which was to deliver the products to offices also. Upon evaluation of all three it was determined that office delivery required the least amount of investment and greatest payoffs for the company. An office hotel in Helsinki on average holds up to 300 employees. It is an attractive proposition to have the same delivery address for the multiple customers. After careful consideration and using the business model canvas to then further validate this solution in the market, this specific alternative was chosen.

MIF and the inclusion of office deliveries to its service offering received excellent feedback from its customers. However while still monitoring its business model through the framework, the team identified that it still faced a major roadblock in the form of its packaging processes. Packaging is a strenuous task as it involves the portioning of each ingredient to be delivered. Since the emphasis is on fresh ingredients and sustainable practices, the company needs to be careful with the material it uses for packaging and the processes pursued in order to portion ingredients. For a small startup, this introduces hectic costs which feed off the profitability of the company. This significant roadblock was also identified and resolved using the framework. This is illustrated in Figure 52 below.



*Figure 52. Iteration through framework to packaging.*

The identification of packaging costs being a major roadblock caused significant problems to the business. Packaging forms the heart of the concept as it directly reflects what the customer receives. Not only was packaging an extremely cost driving process

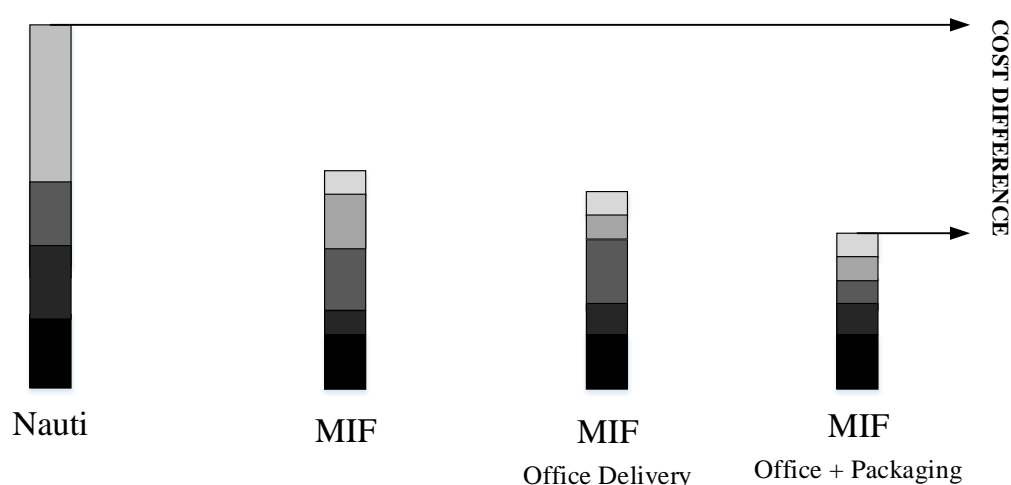
but also very time consuming. The company faced growth restrictions also since it could not cope with handle significant increase in packaging responsibilities. Using new technology such as industrial equipment to sort and portion ingredients was pursued but the business lacked the finances to go out and invest in such expensive machinery. Similarly in terms of innovation the company could not devise a solution to counter this specific problem while not extensively burdening the company with expenses. The way forward was to outsource packaging processes. The team realized that it would be much simpler for the supply chain if it received portioned ingredients already from the farms. This way the tasks which MIF needs to perform would only consist of sorting and labelling. However the major challenge here was to convince the suppliers of putting in the extra effort to carry out portioning processes at this end. This was another roadblock.

Up to five years ago, in supermarkets in Finland it was not possible to buy a packet of 6 tomatoes. The number tended to be higher. However if the current supermarket trend is studied then practically every store now keeps packets with six tomatoes in them. This is because after research, a trend was determined that a quantity of six is a convenient number for customers to buy and also feasible to sort and package. It is the same logic which MIF is now using with its suppliers. While the packaging process has not been fully outsourced yet, the direction of the negotiations does suggest that this solution is not far away for the company to achieve.

### **7.3. Analysis of the Results and Limitations**

The objective of the thesis was to develop an iterative framework that made use of cost structures to find effective solutions to roadblocks faced by startup companies. The focus of the whole study was on costs and how costs are one of the major stumbling blocks to the success of a startup venture. The study successfully developed an iterative framework and made use of the principles of the Lean Startup Methodology to construct its evaluation method. Using the iterative loop Build Measure Learn from the LSM, the concepts of business model canvas and cost structure analysis were used to perform evaluation processes. This led to the framework designed and illustrated in Chapter 4.3 with Figure 29.

The iterations of the business model from Nauti all the way to the present stage which is Most Interesting Food with outsourced packaging were then analyzed through the framework in Chapter 7.2. This quantified the effectiveness of the model and its practical relevance to real life cases. The cost difference throughout the iteration process is presented in Figure 53 below.



**Figure 53.** Cost differences for all the iterations through the framework.

While taking into consideration the success of the framework, irrespective of the success in its iterative nature, it is important to ascertain whether the solutions for the roadblocks identified and the consequent cost savings were significant enough or not. Figure 53 illustrates that the cost difference achieved throughout the iteration process from Nauti all the way to MIF office + packaging are significant. The use of the framework to make iterations consistently derived a downward trend towards costs. Nauti to MIF was the significant pivot in all of the iterations and thus has the steepest cost saving curve. However the trend illustrates the effectiveness of the framework in solving roadblocks and as a result effectively decreasing costs. More so, two of the resolutions to roadblocks were through innovation. Nauti and its transition to MIF, a dinner kit delivery service, was an innovation in the Finnish market whereas for this service to deliver to offices was also an innovation in its industry. This shows that the framework effectively helped in identifying roadblocks and offering solutions which could lead to significant innovation.

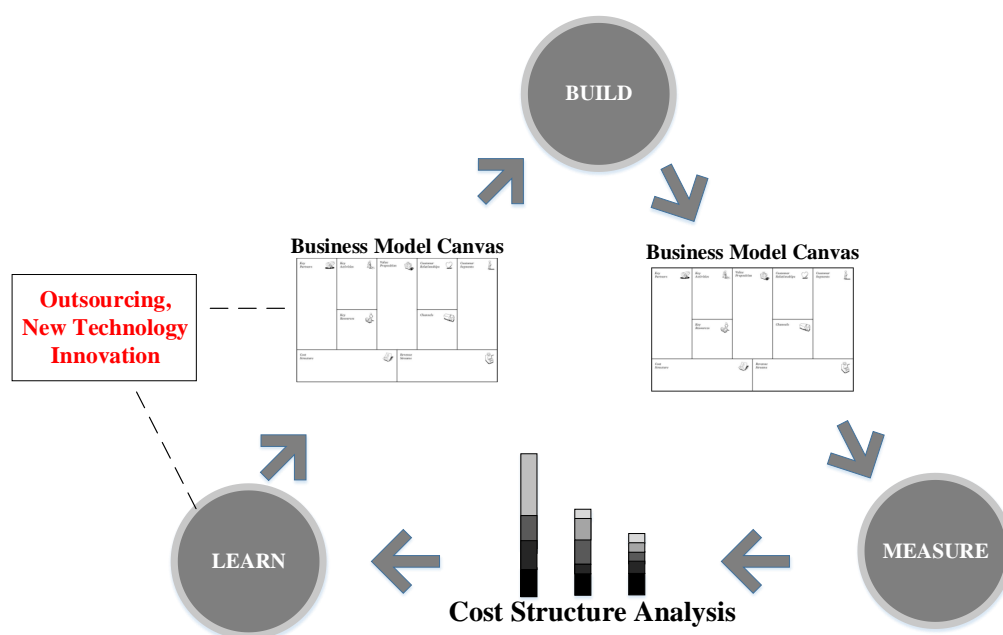
The focus of the framework, however, is specifically on innovation derived from process need. While this scenario is quite common as a roadblock for startup companies it is not the only roadblock which exists. There are also environmental and psychological roadblocks that startups need to solve. More so, while this framework focuses on costs, it does not emphasize enough on customer needs, market development, competition and other factors that are major reasons for the failure of a startup as identified in Chapter 4.1. The framework proposed is an effective tool for resolving roadblocks that are cost related however other sources of barriers to success for a startup still need to be tackled.

## 8. CONCLUSIONS

In today's market, technology based startups are a growing trend. Recent years have seen a spike in the number of startups created every year. These are interesting times since when the number of startups drastically increases, the number of products on offer drastically increase also. As a result the market is ripe with competition with each startup looking to gain competitive edge over the other and sweep over the market. For every Facebook like success, there are hundreds of failure where the companies have tried to more or less similar products yet have failed in doing so. Startup failures defined as failure to meet the expectations the entrepreneurs have set themselves is at an all time high of 90%. The Figure makes grim reading as it suggests that nine in every ten startups fail. Failure is a common trait of the startup industry. Any new initiative taken by individuals or teams to pursue a startup is met with barriers. These barriers are referred to as roadblocks to the incubation, growth and success of the company. While various different types of roadblocks exist for startups, one of the most common types are cost related. While developing a business model, it is important to ensure that the processes within the model are cost effective and practical to have a scalable future. A good working business model that cannot be scaled up is of no use to anyone.

The objective to this thesis was to develop an iterative framework using the principles of lean startup methodology that help in resolving cost driven roadblocks that startups face. In order to achieve this, the thesis relies heavily on the concepts of cost structure analysis and the business model canvas. The framework implies that using the cost structure analysis it is possible to determine cost relevant roadblocks. The business model canvas can then be used to monitor changes to the business model once solutions are determined.

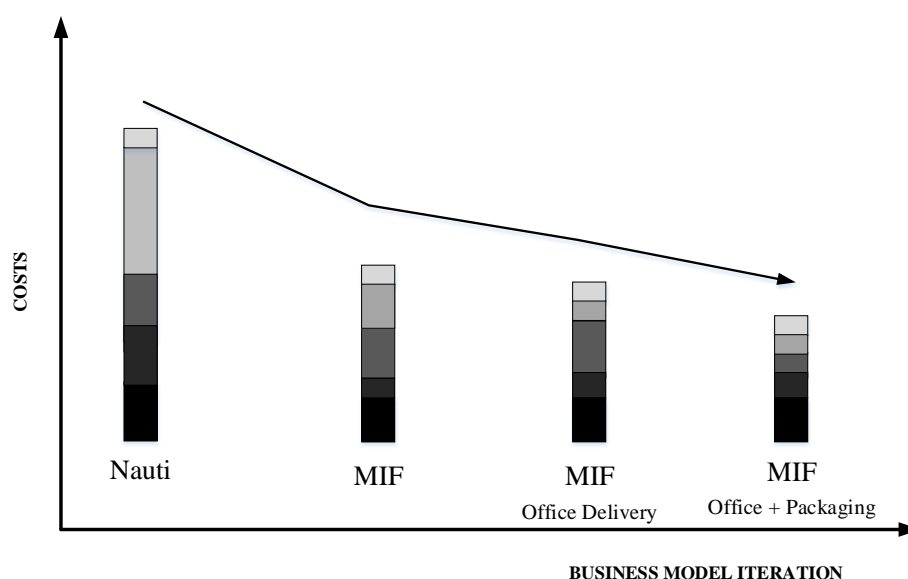
The framework proposes that at every stage of the Build Measure and Learn loop from the LSM process, it is necessary to test the business model through the business model canvas and also measure its effectiveness using cost structure analysis. The constructed model is shown in Figure 54 below.



**Figure 54.** Framework for resolving roadblocks in startups

As can be seen, the framework advocates testing the model as soon as it is built. Other than the problem and solution hypothesis, the model also needs to be tested in the market. Afterwards the model is measured using cost structure analysis to ensure that it does not face any significant cost related roadblocks. This analysis reveals a lot of information which goes into the knowledge store of the company. Using learning from this knowledge store, the company can then choose from three alternatives, in terms of processes, to seek a solution to the roadblock. The model is iterative since it works in the form of a loop. Even when a solution is reached, it is still imperative to make it continuously go through the loop to ensure that no further roadblocks exist.

The practicality and effectiveness of the framework was tested on the case company. Its transition from Nauti to Most Interesting Food in its present state featured three iterations of which one was a major industry pivot. All these were tested on the framework to determine whether the framework was successful or not. Criteria for the success of the framework was not only based on finding adequate solutions to roadblocks but also on how effectively costs were reduced during the whole process. Figure 55 below shows the general trend of costs throughout the iteration process. All of these iterations were analyzed through the framework.



**Figure 55.** General trend for costs during iterations.

As can be seen from the Figure, the framework resulted in significant cost reductions for the business while resolving the roadblocks that it faced. More so, two innovations were plotted through the framework using cost structure analysis. The first was Nauti's pivot to Most Interesting Food and the second was MIF delivering to offices. This further identifies the success of the framework as not only a tool for removing roadblocks but also deriving innovation.

The framework, however, is limited to cost structure analysis and thus only applies to the roadblocks that arise due to costs. In the life of startups, costs offer significant roadblocks but they are not the only roadblocks that exists. Roadblocks appear in the form of external environment, market trends, team psychology and technology development for instance. These are not covered by this framework and more work needs to be done to take these into consideration also.

## BIBLIOGRAPHY

- Agarwal, S. & Ramaswami, S. N., (1992). Choice of Foreign Market Entry Mode: Impact of Ownership, Location and Internalization Factors. *Journal of International Business Studies*. Vol. 23, Iss. 1, pp. 1-27.
- Aghion, P., (2011). How to Drive Innovation in European Markets. Available: [http://ec.europa.eu/economy\\_finance/events/2006/bxlforum/davis\\_speech\\_en.pdf](http://ec.europa.eu/economy_finance/events/2006/bxlforum/davis_speech_en.pdf)
- Amit, R. and Zott, C., (2001). Value Creation in e-Business. *Strategic Management Journal* 22. pp 493-520
- Andreessen, M., (2007). The Pmarca Guide to Startups, Part 4: The only thing that matters. Available: <http://web.archive.org/web/20070701074943/>
- Ashley, E., (2008). *Outsourcing for Dummies*. Wiley Publishing.
- BD, (2015). What is cost structure. *The Business Dictionary*. Available: <http://www.businessdictionary.com/definition/cost-structure.html>
- Berg, J., (2011). Three Growth Models. Estin & Co, London. pp 1-7. Available: <http://www.estin.com/pdf/publications/ThreeGrowthModels.pdf>
- Blank, S., (2006). *The Four Steps to the Epiphany: Successful Strategies for Products that Win*. Cafepress 3th Edition. pp. 20-54
- Blodget, H., (2013). Dear Entrepreneurs: Here's how bad your odds of success are. Tech Section, *Business Insider*. Available: <http://www.businessinsider.com/startup-odds-of-success-2013-5?IR=T>
- Blumenthal, N., (2013). What is a Startup? *Forbes Business Issue*. Available: <http://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/>
- Brown, S. (1993). A Primer on Q Methodology, *Operant Subjectivity*, Vol. 16, pp. 91-138
- Campbell, S., (2014). A Rigid Mind Blocks Success. *Entrepreneur Inc.* Available: <http://www.entrepreneur.com/article/239892>
- CBInsights., (2014). Top 20 Reasons Why Startups Fail. *CB Insights Ltd.* Available: <https://www.cbinsights.com/blog/startup-failure-reasons-top/>
- Chesbrough, H., (2008). Managing False Negatives. *Harvard Management Update*, Vol. 13, Iss. 5.

- Coes, B., (2014). Critically Assessing the Strengths and Limitations of the Business Model Canvas. University of Twente. pp 10-29
- Crosby, M., (2000). Patents, Innovation and Growth, *The Economic Record*, Vol. 76, No. 234, pp. 255-262.
- DelightIO, (2014). A post mortem for DelightIO. Available: <https://medium.com/@thomaspun/failed-to-delight-4de7ef031c3a>
- Dholakiya, P., (2015). 4 Ways to Cut Costs Using Technology. Available: <http://www.entrepreneur.com/article/247577>
- Drucker, P. F., (1985). The Discipline of Innovation. *Harvard Business Review*. Vol. 63, Iss. 3, pp. 67-72.
- eCrowds, (2011). A post mortem for eCrowds. Available: <http://davidcummings.org/2010/06/04/post-mortem-on-a-failed-product/>
- Emiliani, M.L., (2006). Origins of lean management in America: The role of Connecticut businesses. *Journal of Management History*, Vol. 12, No. 2, pp. 167-184
- Fagerberg, J., Guerrieri, P. & Verspagen, B., (2000). The economic challenge for Europe: Adapting to innovation-based growth, Edward Elgar Publishing, Northampton.
- Flud, (2013). A Post Mortem for Flud. Available: <http://techcrunch.com/2013/09/22/why-startups-fail-a-postmortem-for-social-newsreader-flud-and-what-to-take-from-sonars-demise/>
- Forbes, (2015). George C. Fraser's Rules for Making Network Relationships Click. *Forbes Business*. Available: <http://www.forbes.com/small-business-network/>
- Ford, D., Gadde, L., Hakansson, H. & Snehota, I., (2011). *Managing Business Relationships*. 3rd Edition. Wiley Publications.
- Furr, N. & Ahlstrom, P., (2011). Nail it then Scale it: The Entrepreneur's Guide to Creating and Managing Breakthrough Innovation, NISI Institute, USA. pp. 52-95
- Gamelayers, (2009). A post mortem for Gamelayers. Available: <http://links.net/vita/gamelayers/>
- Graham, P., (2013). Dear Entrepreneurs: Here's how bad your odds of success are. Tech Section, *Business Insider*. Available: <http://www.businessinsider.com/startup-odds-of-success-2013-5?IR=T>
- Greenhalgh, C. A., & Rogers, M., (2006). The value of innovation: the interaction of competition, R&D and IP. *Research Policy* 35. pp 562–80.
- Gummesson, E., (1993). Case study research in management: Method for generating qualitative data, Stockholm University, Department of Business Administration, pp. 61



- Gustafsson, A. & Qvillberg, J., (2012). Implementing Lean Startup Methodology – An Evaluation. Chalmers University of Technology, Gothenburg. pp 33-69.
- Hirai, A., (2010). What kills Startups. Secret Sauce for Entrepreneurs. Cayenne Consulting. Available: <http://www.caycon.com/downloads/What-Kills-Startups.pdf>
- Hjalmarsson, D., (2010). Follow up of the newly established enterprises in 2005 – three years after the start, Östersund: Tillväxtanalys (Tillväxtanalys Statistik 2010:02)
- Hudson, M., (2015). New Reports Confirm Startup Activity Increasing --- After Years of Decline. Forbes for Entrepreneurs. Available: <http://www.forbes.com/sites/mariannehudson/2015/06/22/new-report-confirms-startup-activity-increasing-after-years-of-decline/>
- Inc., (2009). 7 Startup success stories. Inc Group USA. Available: <http://www.inc.com/ss/7-start-success-stories>
- Ivanova, Z., (2014). 5 Reasons You Should Focus On Your Core Competency. Small Marketing Strategies for Small Businesses. Available: <http://zornitsaivanova.com/5-reasons-you-should-focus-on-a-specialty-in-your-business/>
- Janakiram, B. & Rizwana, M., (2011). Entrepreneurship Development: Text and Cases. India, Excel Books. pp. 240
- Jay, E., (2010). Viagra and other drugs discovered by accident. BBC.
- Kaminsky, P., (2003). Managing the Supply Chain: The Definitive Guide for the Business Professional. McGraw Hill Professional. pp 1-9
- Kohlbacher, F. & Herstatt, C., (2008). The Silver Market Phenomenon - Business Opportunities in an Era of Demographic Change. Heidelberg, Springer-Verlag Berlin Heidelberg. pp. 305
- Kotler, P., (1988). Marketing Management: Analysis, Planning and Control 6th Edition. Prentice Hall.
- Kumar C. R., (2008). Research Methodology, New Delhi, APH Publishing Corporation.
- Lyly-Yrjänäinen, J., & Suomala, P., (2011). Operative Sales and Sourcing in B2B Markets. Tampere University of Technology, Tampere, Finland.
- Lyly-Yrjänäinen, J., Velasquez, S., Suomala, P. & Uusitalo, O., (2010). Introduction to Industrial Management. 2nd ed. Tampereen Yliopistopaino Oy, pp. 296-327
- Magretta, J., (2002). Why Business Models Matter, *Harvard Business Review*

- Markides, C., (2008). *Game-Changing Strategies: How to Create New Market Space in Established Industries by Breaking the Rules*, Published by Jossey-Bass.
- MBACO, (2014). What is a cost structure. MBA & Company. Available: <http://www.mbaco.com/resources/finance/what-is-a-cost-structure>
- McGrath, J. E & Brinberg, D., (1983). External Validity and the Research Process: A Comment on the Caldre/Lynch dialogue. *Journal of Consumer Research*. Vol. 10, Iss. 1, pp. 115-124.
- McKinsey, G. I., (2005). *Impact of Management Innovation on Productivity*. London School of Economics.
- McKinsey, G.I., (2005). *Increasing Global Competition and Labor Productivity: Lessons from the US Automotive Industry*. McKinsey publications. Available: <https://www.mckinsey.com/~media/McKinsey/dotcom/Insights>
- Nadiri, I., (1993). *Innovations and Technological Spillovers*, NBER Working Paper no. 4423, Cambridge, Mass.: National Bureau of Economic Research.
- Nobel, C., (2011). *Why Companies Fail – and How their Founders can Bounce Back*. Harvard Business School. Available: <http://hbswk.hbs.edu/item/6591.html>
- Nowak, K., (2013). *Post mortem of my first company*. Available: <http://keithbnowak.com/post/55830173333/postmortem-of-my-first-company-a-reposting>
- Numbeo, (2015). *Living costs in Barcelona*. Available: [http://www.numbeo.com/cost-of-living/city\\_result.jsp?country=Spain&city=Barcelona](http://www.numbeo.com/cost-of-living/city_result.jsp?country=Spain&city=Barcelona)
- Numbeo, (2015). *Living costs in Helsinki*. Available: [http://www.numbeo.com/cost-of-living/city\\_result.jsp?country=Finland&city=Helsinki](http://www.numbeo.com/cost-of-living/city_result.jsp?country=Finland&city=Helsinki)
- O’Sullivan, D. & Dooley, L., (2008). *Applying Innovation*. Sage Publications, Inc. 2nd Edition. pp. 3-17
- Oxford, (1998). *What is Innovation?* The New Oxford Dictionary of English. Vol. 16, pp. 942
- Oxford, (2015). *What does roadblocks mean*. The Oxford English Dictionary. Available: <http://www.oxforddictionaries.com/definition/english/roadblock>
- Patel, N., (2015). *90% of Startups Fail: Here’s what you need to know about the 10%*. Forbes for Entrepreneurs. Available: <http://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/>

- Poland, S., (2011). A post mortem for MyFavorites. Available: <http://www.stevepoland.com/the-little-startup-that-couldnt-a-postmortem-of-myfavorites/>
- Power MJ., Desouza KC., & Bonifazi C. (2006). The outsourcing handbook: how to implement a successful outsourcing process. Kogan Page Limited
- Rajasekar., S. Philominathan., & P. Chinnathambi., V. (2006). Research metrology. Available at: <http://arxiv.org/pdf/physics/0601009.pdf>
- Ries, E., (2011). The Lean Startup: How Constant Innovation Creates Radically Successful Businesses, Penguin Group, London. pp. 77-149
- Rosenfeld, R. & Servo, J.C., (1991). Facilitating innovation in large organisations. Managing Innovtation. pp. 28-33
- Routledge, (2012). Classic Political Economy and Modern Theory. Essays in honor of Heinz Kurz. Routledge Studies in History and Economics. pp 143-147
- Schumpeter, J. A., (1942). Capitalism, Socialism and Democracy, reissued 1975. New York: Harper & Row. pp 102-105
- Shane, S., (2008). The Illusions of Entrepreneurship: The Costly Myths That Entrepreneurs, Investors, and Policy Makers Live By, Yale University Press, London.
- Simchi-Levi, D., (2004). The Logic of Logistics: Theory, Algorithms, and Applications for Logistics and Supply Chain Management. Springer Science & Business Media. pp 1-12
- Tayauova, G., (2012). Advantages and disadvantages of outsourcing. Kazakh-British Technical University. pp. 188-195
- Treehouse Logic., (2010). Post Mortem for Treehouse Logic. Available: <http://www.notey.com/blogs/treehouse-logic>
- Tutorspree, (2013). A post mortem for Tutorspree. Available: <http://www.aaronkharris.com/when-seo-fails-single-channel-dependency-and-the-end-of-tutorspree>
- Webster, M., (2015). Definition of a Startup. Meriam Webster English Dictionary. Available: <http://www.merriam-webster.com/dictionary/start-up>
- Webster, M., (2015). What does roadblocks mean. Meriam Webster English Dictionary. Available: <http://www.merriam-webster.com/dictionary/roadblock>
- Wilder, B., (2015). Four psychological reasons why entrepreneurs fail to maximize business value. The Quiet Millionaire. pp 2-5

- Winton, N., (2014). Global Auto Makers Need To Spend 3\$ Trillion in 10 Years. Forbes Issue of Business. Available: <http://www.forbes.com/sites/neilwinton/2014/01/20/global-auto-makers-need-to-spend-3-trillion-in-10-years-mckinsey/>
- Womack, J. and Jones, D., (2003). Lean Thinking: Banish Waste and Create Wealth in Your Corporation. Simon & Schuster Inc, New York. pp 15
- Zott, C. and R. Amit., (2009). Designing Your Future Business Model: An Activity System Perspective, Long Range Planning.